

**Water, Informality, and Hybridising Urban Governance in  
Taiwan**

By  
Ker-Hsuan Chien

Department of Geography and Earth Sciences  
Aberystwyth University  
2015









# Contents

<b>SUMMARY</b>	<b>IX</b>
<b>ACKNOWLEDGEMENTS</b>	<b>X</b>
<b>1. BUILDING A HYDRO-CITY?</b>	<b>1</b>
1.1. GOVERNING TAIPEI'S WATER	1
1.2. WATER AS THE NEW GENTRIFIER?	5
1.3. ASSEMBLING THE CITY	8
1.4. URBAN WATER, URBAN INFORMALITY, AND URBAN ENTREPRENEURIALISM	10
1.5. THESIS CHAPTERS	14
<b>2. CITIES OF ASSEMBLAGES</b>	<b>17</b>
2.1. CITIES IN PLURAL TERMS	18
2.1.1. ORDINARY CITIES	18
2.1.2. THINKING THE URBAN COMPARATIVELY	24
2.2. DELINEATING AN UN-TOTALISED CITY	29
2.2.1. ASSEMBLAGE THINKING AND SPACE	31
2.2.2. CITY AS ASSEMBLAGE	36
2.2.3. OBJECTS IN THE ASSEMBLAGE	43
2.3. CONCLUSION: TOWARD AN ASSEMBLAGE THINKING OF THE URBAN WORLD	45
<b>3. ASSEMBLING THE URBAN SOCIO-MATERIAL WORLD</b>	<b>48</b>
3.1. TRACKING THE NEOLIBERAL FLOWS	49

3.1.1.	THE ALMIGHTY NEOLIBERALISM	50
3.1.2.	NEOLIBERAL URBANISM AND URBAN ASSEMBLAGE	56
<b>3.2.</b>	<b>MAPPING THE HYDRO-CITY</b>	<b>58</b>
3.2.1.	ASSEMBLING HYDRO-URBANISATION	59
3.2.2.	WATER IN THE URBAN ASSEMBLAGE	61
3.2.3.	LEARNING URBAN WATER	65
<b>3.3.</b>	<b>ASSEMBLING THE INFORMAL URBAN CONDITION</b>	<b>68</b>
3.3.1.	INFORMALITY AND URBAN LIVING	70
3.3.2.	ASSEMBLING URBAN LIVES	73
<b>3.4.</b>	<b>CONCLUSION</b>	<b>79</b>
<b>4.</b>	<b>RELATIONAL SPACE AND URBAN JUSTICE</b>	<b>82</b>
<b>4.1.</b>	<b>INTRODUCTION</b>	<b>82</b>
<b>4.2.</b>	<b>ASSEMBLAGE AND FLAT ONTOLOGY</b>	<b>83</b>
4.2.1.	RELATIONAL GEOGRAPHY: HOW THINGS BECOME SPACES?	84
4.2.2.	ASSEMBLING FOR URBAN JUSTICE AND MATERIALITY	87
<b>4.3.</b>	<b>CONCLUSION</b>	<b>91</b>
<b>5.</b>	<b>URBANISATION IN TAIWAN</b>	<b>93</b>
<b>5.1.</b>	<b>TAIPEI: AN URBANISATION EXPERIENCE FROM GLOBAL SOUTH</b>	<b>93</b>
<b>5.2.</b>	<b>ROOM FOR WATER, NOT FOR PEOPLE?</b>	<b>96</b>
<b>5.3.</b>	<b>CONCLUSION</b>	<b>102</b>
<b>6.</b>	<b>RESEARCH METHODOLOGY</b>	<b>104</b>

<b>6.1. ASSEMBLAGE AS A METHODOLOGICAL TOOL</b>	<b>105</b>
<b>6.2. DATA COLLECTION</b>	<b>107</b>
6.2.1. THE CHOREOGRAPHY OF DATA COLLECTION	107
6.2.2. THE INTERVIEWS AND OBSERVATIONS	108
6.2.3. SECOND-HAND DATA COLLECTION	110
6.2.4. ANALYSING THE DATA	111
<b>6.3. CONCLUSION</b>	<b>112</b>
<b><u>7. GOVERNING URBAN BAD WATER</u></b>	<b><u>113</u></b>
<b>7.1. INTRODUCTION</b>	<b>113</b>
<b>7.2. ASSEMBLING URBAN WATER</b>	<b>118</b>
7.2.1. LEARNING MODERN WATER	120
7.2.2. MOMENTS OF DISSEMBLY: 'BAD WATER' IN THE CITY	124
7.2.3. RE-ASSEMBLING THE WATERFRONT	132
<b>7.3. WATER AS NEW URBAN ENTERPRISE</b>	<b>136</b>
<b>7.4. CONCLUSION</b>	<b>140</b>
<b><u>8. URBAN INFORMALITY AND HYDROLOGICAL GENTRIFICATION</u></b>	<b><u>145</u></b>
<b>8.1. ASSEMBLING TAIWAN'S URBAN INFORMALITY</b>	<b>148</b>
8.1.1. INFORMALITY AS THE STATE OF EXCEPTION	148
8.1.2. INSTITUTIONALISED INFORMALITY —THE LEGAL-ILLEGAL CONTINUUM	154
8.1.3. URBAN INFORMALITY AS THE NEW URBAN COMMON SENSE	157
8.1.4. POPULIST INFORMALITY – THE DEMOCRATISATION OF URBAN GOVERNANCE	162
8.1.5. NEOLIBERAL URBANISM AND INFORMALITY	165

<b>8.2. THE CLASHING OF WATER ORDER AND INFORMALITY</b>	<b>170</b>
8.2.1. THE DISRUPTED WATERFRONT DWELLING	171
8.2.2. HYDROLOGICAL ORDERS FOR THE WATERFRONT PLANNING	175
8.2.3. SANITISING URBAN WATER, GLAMOURISING THE NEIGHBOURHOOD	179
<b>8.3. CONCLUSION: THE ASSEMBLAGE OF HYDROLOGICAL GENTRIFICATION</b>	<b>186</b>
<b><u>9. ENTREPRENEURIALISING URBAN INFORMALITY</u></b>	<b><u>189</u></b>
9.1. INTRODUCTION	189
9.2. NEOLIBERALISING THROUGH THE COMMUNITY	190
9.2.1. THE URBAN ENTREPRENEURIALISM REACHING OUT	191
9.2.2. COMMUNITY PLANNING AS THE ENTREPRENEURIAL FIX	194
9.3. ENTREPRENEURIALISED INFORMALITY, ENTREPRENEURIALISED COMMUNITY	202
9.3.1. ENTREPRENEURIALISING URBAN INFORMALITY: THE STRATEGICALLY EMBRACING	203
9.3.2. THE ANTI-CARICATURE OF INFORMALITY: COUNTER-CONDUCTING THE	
ENTREPRENEURIAL THINKING	212
9.4. CONCLUSION	216
<b><u>10. CONCLUSION: RIVER CITY? ENTREPRENEURIAL CITY?</u></b>	<b><u>219</u></b>
10.1. BANKING THE BAD WATER	221
10.2. HYDROLOGICAL GENTRIFICATION	223
10.3. ASSEMBLING URBAN INFORMALITY	225
10.4. ENTREPRENEURIALISING INFORMALITY, ENTREPRENEURIALISING CITY	227
10.5. THE HOPE FOR RESISTANCE? COUNTER-CONDUCTING THE NEOLIBERAL LOGIC	228
10.6. CONCLUSION	230



## Figures

Figure 3-1The typology of informal settlements. ....	77
Figure 5-1 The major transformation through Taipei's urban development.....	96
Figure 5-2 The number of days of torrential rain in Taiwan.....	97
Figure 5-3 Tam-Sui River system and the Taipei Metropolitan.....	98
Figure 5-4 The geographical relation between Big Bi-Tan project, the Xi-Jou tribe, and the Lu-Gong channel. ....	100
Figure 7-1 Taipei city centre taken by flood. ....	114
Figure 7-2 Flood water paralyse the train station. ....	115
Figure 7-3 The straightening of the Keelung river channel in 1964. ....	124
Figure 7-4Taipei's changing flood pattern.....	128
Figure 7-5 Xin-Hai Wetland.....	134
Figure 7-6Chiang-Tsui Park with gravel contact oxidation process. ....	136
Figure 7-7 Ba-Li Sewerage Treatment Plant. ....	137
Figure 7-8 Wu-Lai Sewerage Treatment Plant. ....	137
Figure 8-1Old veterans with their informal veteran houses. ....	150
Figure 8-2Informal settlements in reserved parkland No. 14, 15. ....	153
Figure 8-3An informally attached rooftop in Taipei County. ....	161
Figure 8-4The informal extensions in the service lane.....	161
Figure 8-5The photograph of Treasure Hill. ....	170
Figure 8-6Xi-Jou tribe. ....	172
Figure 8-7The informal veteran houses and Liu-Gong channel. ....	181
Figure 8-8 The veteran houses community and the condo they live across from.....	181

<b>Figure 8-9</b>	<b>The first section of Liu-gong channel. ....</b>	<b>182</b>
<b>Figure 9-1</b>	<b>The newly built modern buildings located near the Liu-Gong channel.....</b>	<b>205</b>
<b>Figure 9-2</b>	<b>The extensions of informal settlements.....</b>	<b>207</b>
<b>Figure 9-3</b>	<b>The extensions of informal settlements.....</b>	<b>207</b>

## **Tables**

<b>Table 1-1</b>	<b>Countries at Relatively High Risk from Multiple Hazards. ....</b>	<b>2</b>
------------------	--	----------

<b>Table 7-1</b>	<b>Major Floods in the last 20 years.....</b>	<b>129</b>
------------------	---	------------



## Summary

In the past ten years urban adaptation in the changing climate has become a primary concern for urban governance, as cities, especially those in developing countries, are burgeoning while natural disasters escalate. Securing the human habitat in the urban areas has become central to the sustaining of the human race. Dealing with urban water, therefore, is a ceaseless struggle between nature and the human need to seek new knowledge and technology in urban water governance. Being a city in great danger of flooding, Taipei's way of taming urban water has been a long process of disaster experience, knowledge learning, policy transferral, and negotiation with local citizenry. By delineating Taipei's water taming process, not only we can understand the city and water through their co-evolving processes, but we can also re-think how urban water has been conceptualised by man, and how this conceptualisation has affected the human dwellings on the waterfront. To depict the shifting human-water relationships of Taipei, this thesis employs the Deleuzean assemblage theory, treating Taipei's urban water governance as an assembling process of natural events, knowledge learning, mobile urban policy, urban informality, and neoliberal ideology. By adopting assemblage theory in the case of Taipei's urban water governance, the interweaving of floods, water knowledge, historical incidents, human dwellings, and the conducting of neoliberal urban governance can thus be re-figured in a processual manner, as a part of the constituting of the urban assemblage. Through attending to each of the constituents of this assemblage, seeing all parts of the urban assemblage as active and significant, this thesis not only demonstrates how water and the city shape each other, but it also indicates new possibilities in negotiating with neoliberal urban governance.

## **Acknowledgements**

First and foremost, I would like to express my gratitude to my supervisor Prof Mark Whitehead for being a great mentor during this programme, and providing me so many useful advises during the completion of this thesis. I would also like to thank my secondary supervisor Dr Kevin Grove for inspiring me with many ideas regarding the structuring of this thesis. I am also grateful for my examiners, Prof Michael Woods and Prof Maria Kaika, for helping me turning this thesis into a better form. I would like to thank the fellow of G1 office, Chandra, Kate, Kate and Martin, Hilary, Rob, Mette, John, Oli, Jen, Justa, Marton, Sam, and Dan for the fun time and inspirational conversation in the office. Thanks to all the interviewees, especially those from the Liu-Gong channel community and the Xi-Jou tribe. This project cannot be done without their participation. Thanks to the University for the financial support to this project. I would also like to thank John, Colin, Delyth, and the Aberystwyth Rotarians for their warm hospitality during our stay in Aberystwyth. Finally, I would like to thank Chi-Mao and my families for their love and support.

# 1. Building a Hydro-City?

## 1.1. Governing Taipei's Water

In August 2009 Typhoon Morakot paralyzed Southern Taiwan with the record-breaking rainfall it brought, causing 681 deaths and 18 missing. While the media and the public were still in shock trying to figure out who should be held responsible for this devastating event, Lee Hong-Yuan, the recently resigned deputy mayor of Taipei County in Northern Taiwan appeared on the television repeatedly stressing the importance of taking water into consideration when addressing issues of land use planning. As he stated in a television programme:

*'Incorporating water detention in urban regulation is not difficult, it has been done in all the states in the US. If someone develops urban land into concrete land and decreases its infiltration rate, the surface runoff surely would increase. Therefore the developers should be obliged to build another water detention in its developing area, [...] the water detention can be a pond, or a park with lower ground. It should not be taken as a moral persuasion, but instead should be a legal obligation that everyone must obey. The car parks, the schools, and the pedestrians in urban areas should be built in permeable materials so that the runoff can be decreased along its path. Once this is done, we no longer need the protection of a huge, expansive drainage systems, instead we can have a beautiful urban landscape'. (PTS Talk, Public Television Service, 17-08-2009)*

He went on demonstrating his previous work in Taipei County, a project under the

River County Scheme he proposed, as proof of his point.

Extreme environmental events such as earthquakes, typhoons, and floods have been occurring repeatedly in Taiwan in the last couple of years. It is in this context that Taiwan is now considered by the World Bank to be the most dangerous place on earth (see Table 1-1). Owing to this fact, the fabric and organisation of urban areas in Taiwan has gradually been changing. On the regulatory level, many lands in elevated areas were listed as dangerous places, and the residents were relocated to safer places. On the legislative level, new laws regarding the seismic capacity of buildings were announced, and the building material and the engineering methods were changed during construction. On the individual level, people started elevating their doorsteps, emptying the ground floor of their houses in order to minimise their potential losses in the wake of recurrent natural hazards.

Country	Percent of Total Area at Risk	Percent of Population in Areas at Risk	Country	Percent of Total Area at Risk	Percent of Population at Risk
Taiwan, China	90.2	95.1	Madagascar	6.3	24.8
El Salvador	51.7	77.7	Trinidad and Tobago	10.0	23.5
Costa Rica	38.2	77.1	Ecuador	3.6	21.4
Philippines	45.6	72.6	Bhutan	10.5	18.8
Dominica	70.8	71.1	Chile	1.0	18.7
Antigua and Barbuda	46.2	69.5	Malawi	5.5	12.9
Guatemala	28.8	69.4	Solomon Islands	0.1	12.0
Japan	23.2	69.4	Mexico	4.4	10.8
Dominican Rep.	33.7	66.0	Fiji	4.1	9.4
Jamaica	40.5	58.8	Albania	4.0	8.6
Nicaragua	4.4	42.7	Cuba	3.5	8.5
Indonesia	4.4	40.1	Samoa	0.7	8.3
Comoros	39.6	32.0	Afghanistan	0.8	8.1
Honduras	18.1	31.8	Pakistan	1.4	5.9
Nepal	31.9	28.0	Venezuela	0.9	5.6
Bangladesh	30.0	26.2	Cameroon	1.1	5.5
Colombia	1.8	25.9	Panama	2.6	5.1
Mozambique	4.7	25.5			

Table 1-1 Countries at Relatively High Risk from Multiple Hazards.

Source: World Bank, 2005, *Natural Disaster Hotspots: A Global Risk Analysis*

Among all the natural hazards in Taiwan, flooding is the primary factor that is driving change in the shape and path of Taipei's urbanisation. The River County Scheme, for example, is Taipei County's recent attempt to re-invent the order of urban land use by

planning metropolitan spaces according to the quantity movement, and recurrence intervals of floods. By adopting Dutch integrated water management from the 'Room for the River' project, Taipei's watersheds were planned to be emptied for the use of water detention, so that even extreme weather events could be contained by these water detentions, minimising the possible flood-damage brought to people and their properties. In this sense, the relation between water and city in Taipei is constantly changing. This change reflects the city authority's responses to new architectural techniques, water knowledge, evidence of climate change, practices of urban informality, and neoliberal governmentality.

In a Global South city like Taipei, the institutional change of urban water governance should be not understood as merely a change on urban policy. Rather, it should be perceived as the process of negotiating between new understandings of urban water governance, and existing urban conventions. Taipei's existing urban conventions are shaped in particular by the practices of urban informality. Since Taiwan has only been running a weak welfare scheme, urban public housing is in short supply. To the urban subaltern like military veterans and new urban migrants, the only chance for them to get by is to dwell on unattended public lands like parks and watersheds. This dwelling relation involves the development of a store of local knowledge, like experiences on water condition, building regulations, ways to deal with government bureaucrats, and adapting their living to the threats of floods and eviction.

Even for those who are more privileged, who actually own their own private houses, unauthorised attachments to their houses are a common way for them to extend their living space and facilitate extra room for storage and cooking. Over time, these

informal buildings have become a common phenomenon, and an accepted urban tactic for living in Taipei. These informal buildings, through time, have become a vernacular way to cope with the state's deficiency in its provision of housing: a form of compensation granted by the local government. However, with the escalation of floods and the changing of the urban land use ethos, this form of urban informality has clashed with the newly tightened land-use regulations. The dwellers in these informal settlements have increasingly been exposed to the threat of having their houses extracted: either by natural hazards or the state.

Though aiming to protect the city from floods, Taipei County Government's waterfront renovation project was entwined with other agendas. With the newly introduced water management methods and engineering knowledge, the once polluted, disastrous, unpleasant waterscape of the city is now being transformed into wide green public space with an alluring, welcoming appearance, which is expected to bring more investments to the area, regenerating the local economy. Such entanglement of urban security, water management, urban informality, housing issues, and economic development, has disrupted the existing dwelling relations between people and the urban waterfront. This thesis aims to address how the three key elements of Taipei – urban water, urban informality, and urban entrepreneurialism – co-constitute the city's current waterscape. With the adoption of assemblage theory, this research emphasises the process by which these three key elements intertwine, and co-evolve along the unfolding of the River County scheme.

## **1.2. Water as the New Gentrifier?**

The issue of urban waterfront regeneration and gentrification is hardly new, since Harvey (1989)'s introduction of urban entrepreneurialism as the key concept for understanding the public-private partnership in Baltimore's waterfront regeneration, countless efforts have been made to demonstrate how the economical rationale was incorporated into the city's development. Urban waterfronts, among other urban locations, are the common targets of such urban regeneration (see Wood and Handley, 1999, Bassett et al., 2002, Bezmez, 2008, Quastel, 2009) since a better, cleaner waterscape not only corresponds to the widespread demand for environmentalism, but also its scenic beauty can provide the driving force for the urban real-estate market. From the Marxist perspective of political ecology, waterfront regeneration has been adopted as the strategy to re-boost the local economy and enhance the city's competitiveness in the global urban hierarchy. While et al. (2004)'s work on the incorporation of environmentalism and urban entrepreneurialism, the concept of an 'urban sustainability fix' is employed to explain how environmentalism entwines with the neoliberal logic of urban governance, and together they are being adopted as the urban strategy for generating economic development in Manchester and Leeds. A similar example of an urban sustainability fix was also found in Toronto's waterfront regeneration plan, which was expected to boost the local economy via policy-led gentrification (Bunce, 2009). This project was first designed as a gentrification project, which focuses on the social impact on local people by the waterfront regeneration project. Although this approach might expose the inequality and exclusion associated with policy-led, sustainably-oriented, waterfront regeneration projects, it fell short of

explaining a few things in the case of Taipei's waterfront regeneration. Though gentrification has been explained as a form of social exclusion driven by the rising living cost (Smith, 1979, Smith, 1987, Slater, 2006, and Lees, 2008), a new cultural hegemony of urban middle class (Ley, 1980, Caulfield, 1989, Butler and Hamnett, 1994, Ley, 1997, Smith, 1996, see Lees, 2000), an urban policy under the global competition (Smith, 2002, Lees, 2003a, Lees, 2003c, Lees, 2003b, Rofe, 2003), it is often being understood as the social consequence of the urban economic development. Policy-driven or not, it is often carried out through the mediation of market, as the cause of market mechanism. However, since Taipei's waterfront renovation project is an urban strategy for development, it is also facilitated by the reason of the urban security and sanitation. That is to say, the gentrifier here is not just urban middle class, but a new concept of how urban waterfront should be governed, and what water can be to the city. Under the circumstances, I soon found the role of water in this project is largely similar to Dooling (2009)'s work of ecological gentrification. In her work, she draws on Agamben's notion of *bare life*, which addresses how sovereignty maintains its powers by flexibly deciding who is to be banished from the political realm, and using the retreat of sovereign powers as a mode of governing. She then further proposed the idea of 'ecological gentrification' to emphasise how ecology is formed, in a natural science sense, and the way this idea of ecology is reflected in the way people plan and use urban public green space. Gentrification, as she elaborated, should not be treated as merely the urban economical logic that is driving poor people away from the valuable land. Instead, it is a redefining process of people's relation to urban space, the re-conceptualising of urban ecology. What distinguishes her work



from other gentrification works is the focus on the ideological shift of ecology and urban public space, instead of the market force that drives people away. In the light of her work, this research project aims to delineate how the idea of floods and urban water transforms as the city encounters disastrous events, new knowledge of floods, and new methods of water governance. Having said that, since this project mainly pays attention to how the rationales of urban security and sanitation disrupt urban dwelling relation, instead of the use of public space *per se*, as I further argue in the following chapters, this project should be treated as a project of ‘hydrological gentrification’. Hydrological gentrification emphasises on the reconstruction of human lives caused by the ideological change of urban water. By applying this perspective, not only water can be treated as the main force of the urban waterfront’s re-territorialisation, but gentrification can also be understood as can be carried out by the reinventing of urban water, rather than the neoliberal force of market mechanism. With the case of Taipei’s urban water governance, I demonstrate how the natural disasters, urban policy transferring, water knowledge learning, and the everyday encounter between people and water were actually a re-shuffling of the city-water relation.

Having said that, two additional factors also took part in the shaping of Taipei’s city-water relation: urban informality and urban entrepreneurialism. Since informal settlements and attachments constitute the majority of the current urban landscape, the urban informality of Taipei constitutes a significant part of the city’s urban water governance. With the city’s planning ethos being transformed by new knowledge concerning urban water, existing urban informality is being challenged by the new

hydrological order that is being made. Consequently, the old dwelling relation of the informal settlements has to evolve as the new urban policy unfolds. This project is a demonstration of the co-evolving of urban water, urban informality, and urban policy. In order to capture these complex entwining processes, this project adopts assemblage theory as the way to re-think the becoming of Taipei's urban water governance.

### **1.3. Assembling the City**

This research project explores how flows of urban water, mobile urban policy, urban informality, and the logics of neoliberalism interact with each other, and co-evolve into the current urban waterscape of Taipei metropolitan. In order to examine these urban flows, this research draws on insights from Deleuzean thinking concerning assemblage theory. Assemblage theorists regard the city not as a structured space that was produced by capitalism or state strategy, but instead as a space that is partly independent from the things that produce it, which include capital circulation, urban politics, and urban materials (Farias and Bender, 2010). Rejecting to the view of cities as seamless wholes, or totalities, assemblage thinking insists on the autonomous nature of urban entities, seeing urban parts as independent things that co-function in the making of the city, while not being consumed by it (DeLanda, 2006). Assemblage thinking focuses on the process of how urban entities came together, shaping the city while being formed by the city at the same time. In this sense, assemblage theory grants urban study a fresh insight by regarding the city as constantly-in-the-making, as a ceaseless process of assembling and disassembling. By examining the city as a process, the city can thus not be understood as merely a product of one bigger

structure, such as capitalism. Instead, seeing the city as a process can take into account its formation by multiple factors. In the case of this project, these factors include urban water, urban informality, and neoliberal ideology. Through examining Taipei's urban water governance and informality in a procedural manner, this project provides a wider view on Taipei's waterfront regeneration, taking different factors, e.g. floods, sewer, policy transferring, and informality, into consideration. In doing so, this project grants more voice to the constituents of the city, stressing the active role of urban water and the people, instead of seeing them as the victims or the captives of the overwhelming force of neoliberalism.

In recent discussions of urban water, the hydraulic has been examined in many different ways. In the exploration of urban capital circulation, water was treated as a product that was produced through human efforts (Gandy, 2003). By the employment of the metaphorical image of human body, the relations between water and other urban constituents were conceptualised as the urban metabolism that sustaining the life of the city (Swyngedouw, 2004, Kaika, 2005, Swyngedouw, 2006b, Ward et al., 2012). By examining the formation process of the human conception regarding water, the knowledge of urban water was regarded as grounded in certain contexts or particular historical events (Linton, 2010), and as being distributed as a hegemonic ideology (Loftus and Lumsden, 2008) by the global municipal powers (Bakker, 2013a). As a resistance to this hegemonic ideology of urban water, some introduce public participation as the alternative to such knowledge production processes (Whatmore and Landstrom, 2011). In Taipei's case, the current form of urban water governance is composed by the repeated occurrences of extreme weather events, new

flood control methods through urban policy transfer, urban informality, and the neoliberalisation of urban governance (expressed particularly in the introducing of a community planning system). Assemblage thinking in this sense enables a procedural perspective on the forming of Taipei's urban water governance, and an interpretation of urban water governance as a co-evolving of various urban factors. In doing so, this analysis of urban water can avoid being reduced to the consequence of one single structure too quickly, and is constantly re-examined through a constellation of multiple, heterogeneous urban realities.

#### **1.4. Urban Water, Urban Informality, and Urban Entrepreneurialism**

With the insight from assemblage thinking, this research project aims to scrutinise three main issues in urban study. First, how the concept of urban water was formulated, assembled, and learnt in the city. Since the major body of discussion of urban water was mainly grounded in the cities of the Global North, especially in the context of the experience of the Western modernisation processes, the knowledge of urban water is mostly based on the scientific knowledge of hydraulic engineering and water management from both state governance and market rule. This research, though explicit, cannot be generalised as the common knowledge of urban water for all cities. Rather, since cities vary in terms of their hydrology, forms of urban governance, and urban land use, the urban water in cities of the Global South cities is a ceaseless negotiation between their own urban experiences with water, and the learning of knowledge and policy from the West through international collaboration. In the case of Taipei's water, the assembling of modern hydraulic engineering learnt through

foreign aid and academic cooperation, the extreme weather events, and urban informality, are territorialised into a distinct form of urban water governance, which is capable of turning the hazardous landscape of the urban waterfront into the generator of urban economic development. This urban strategy, which I will later describe as ‘hydrological gentrification’, could offer a different angle through which to re-think the entwining of urban floods, water knowledge, and the urban strategy of global urban competition.

The second issue concerns the intertwining of urban water and urban informality. The entanglement of informal settlements and urban water has been described in earlier works on urban informality (Davies, 2006, Dovey and King, 2011). While these works have characterised the morphology of informal settlements and the spatial relation between informal settlements and urban water, my project emphasises the dwelling relation between informal settlements and the waterfronts, through which people accommodated themselves along the urban waterfront. By developing their knowledge toward the threat of floods and the ways to deal with state bureaucrats, people from less privileged background learned local knowledge to accommodate themselves in the urban waterfront. By employing the cases of the informal veterans' houses along Liu-Gong Channel and the Xi-Jou tribe that is situated in the watershed of Xin-Dian Stream, Taipei County, this project demonstrates the processes through which the waterfront informal settlements were formed. I will demonstrate that it was the danger and unpleasantness of the urban waterfront that has historically kept these urban lands away from being incorporated into the capital logic of urban development, whilst leaving room for urban subalterns, and in effect sheltering them from

displacement. I will further elaborate on how this dependency on urban informality was disrupted by the renewed knowledge of urban water and engineering and the entanglement between urban entrepreneurialism and urban water governance.

The third focus of this project addresses the entwining of urban entrepreneurialism and urban informality. Since the new water doctrine mentioned earlier had offered an alternative perspective on how the waterfront should be managed, the old liaison between vicious urban water and urban informality has been disassembled, and squatters have become increasingly threatened by waterfront renovation projects. The waterfront dwellers, as a result, had to adapt through the new urban water policy in order to fit themselves into this waterfront renovation plan. Refusing to be the victims of the entrepreneurialised urban water governance, the people of the Liu-Gong channel veterans' houses and the Xi-Jou tribe learnt to actively employ urban entrepreneurialism as a strategy to sustain their own ways of life. By entrepreneurialising urban informality, the once un-fitted urban informal settlements were redeemed as possessing a sort of one-of-a-kind urban character from Taipei's urban developing path, a cultural attraction that could potentially create more market value than the simple rehabilitation plan of Taipei's official waterfront redevelopment plan. Having said that, the adaptation of urban informality should not be considered as merely a case of incorporating the neoliberal logic of urban entrepreneurialism. The case of the Liu-Gong Channel veterans' houses and the Xi-Jou tribe suggest the exact opposite – through counter-conducting the entrepreneurialising of urban informality, the squatters came aboard the urban cultural marketing game; they were fully aware that the proposition of turning their houses into cultural attractions was just a strategy

for keeping their homes, not for seeking further economic development.

By scrutinising these three focal points, this project aims to offer a grounded perspective on the delicate interaction between urban informality, urban water, and the neoliberal logics of entrepreneurialism. Since the cases in this project are situated in a city transformed through a path that was significantly different from the path of Western urbanisation, they are expected to contribute to the current urban study in three aspects. First, with a Southern perspective, this project aims to demonstrate how urban water governance was formulated through policy learning and the local experiences with urban water. The case of Taipei's urban water governance shows the negotiating process between the idea of Western modern water and the extreme weather events from an Asian context, indicating how the ideology of modern engineering and risk management were adapted in the context of rising incidences of natural disasters. Second, drawing on the informal settlements of Taipei, this project demonstrates how urban informality was at first formed as the state's governmental tool, and through time has gradually become the constant negotiating value of the city. With each event of local election, enforcing of urban policy, or natural disaster taking place, this assemblage of urban informality transforms accordingly through territorialising and de-territorialising. In an assemblage, the components may *'play a mixture of material and expressive roles by exercising different sets of capacities'* (DeLanda, 2006, p. 12). Territorialisation, in DeLanda (2006)'s definition, stands for the increasing degree of homogeneity among the component parts of an assemblage, and the stabilising of this assemblage. If an assemblage was destabilising, and the boundaries between its components were sharpening, this process is called 'de-

territorialisation.’ The concepts of territorialisation and de-territorialisation offer a procedural scope on the constituting of city. In other words, assemblage theory emphasises the everyday encounters of urban informality; people's interactions with the environment, institutions, and with each other. With the delineating of the urban assembling process, the city can be re-imagined through these daily encounters, this ceaseless negotiating process, instead of being overshadowed by the urban imagination produced by the Global North. The third contribution of this thesis focuses on emerging strategies for resisting the logics of neoliberal urban governance. With the two cases mentioned earlier, this project demonstrates how the local squatters resisted the engagement of urban entrepreneurialism via counter-conduct towards neoliberalism, and even counter-proposing an alternative plan as a strategy. By this counter-conducting of urban entrepreneurialism, some local dwellers managed to keep their houses by justifying their homes as potentially profitable assets to the city, whilst remaining conscious about the purpose of the plan – it’s about keeping their homes, not becoming prosperous through them.

## **1.5. Thesis Chapters**

This thesis begins with a brief introduction to the aims and main inquiry into Taipei’s urban water governance and its relation to urban informality. In

Chapter Two, I am going to demonstrate how the post-structuralist turn transformed the current debates of urban study. Through provincialising the idea of city (Robinson, 2006), and thinking of cities in comparative terms (McFarlane and Robinson, 2012), the city can no longer be treated as an idea abstracted from the urban experiences of



the Global North. Rather, this ordinary city perspective initiates more possibilities for discovering the heterogeneity of cities. Drawing on such diverse views of the city, I then further elaborate on how assemblage thinking sheds light on delineating the multiplicity of the city. By employing Deleuzean assemblage thinking, it is argued that the city can be re-learned as the constellation of its materiality, urban policy, economic strategy, historical contingency, and people's mundane livings. Chapter 3 goes on to explain how assemblage thinking contributes to the discussion of urban space, and the various issues it involves. I emphasise three major urban topics in contemporary urban discussion: neoliberal urbanism, urban informality, and urban water. By adopting assemblage thinking on these three issues, the city then is able to be known not merely through its political and economical structure, but also through the daily encounters of people, the carrying out of urban policy, and the taking place of each natural disaster. In other words, the city can thus be deemed as the interweaving and the co-evolving process of these urban entities, and we can thus see the city from a more grounded, more diverse set of perspectives. Chapter 4 explains how assemblage as a way of thinking can initiate a procedural examination of the becoming of Taipei's waterscape. I will argue, instead of rejecting the more structured view of space as found in Marxist political economy, assemblage theory actually contributes to a reconciliation of the insights from critical urbanism and the new light shed by the post-structuralist views on space, e.g. relational space, by emphasising the entwining process of urban entities. With the introduction of my case areas in Chapter Five, Chapter Six then brings assemblage theory to the execution level, demonstrating the way in which assemblage theory is being adopted as not only a

concept, but also a method for describing and analysing the urban elements. In Chapter Seven, I further elaborate on the assembling process of urban water governance. By employing the case of urban water governance in Taipei, I demonstrate how the idea of modern water was learned by Taipei from various agencies of the Global North through international cooperation, and how this idea of water transforms as new facts are discovered, new technology being invented, and new urban policy being transferred. Chapter Eight goes on to propose the concept of hydrological gentrification to amplify how the newly introduced idea of water governance transforms people's idea of urban waterfronts, whilst disrupting the existing forms of human dwelling in the city. By employing assemblage thinking, urban informality in Taipei is understood as the constant negotiating between the modern urban planning ethos, urban subalterns, and flood events. Hydrological gentrification can be understood as the new water order's disrupting of dwelling relations as new water governance arrangement enters the urban assemblage. Chapter Nine points out the possible resistance to this hydrological gentrification. By counter-conducting the purpose of waterfront rehabilitation and counter-proposing the informal neighbourhoods as being culturally significant, the informal settlements create a new entwining of urban informality and entrepreneurialism to sustain their legitimacy for staying whilst remaining aware of their right to their homes. In the last chapter, I am going to stress the implications of the cases, and the way assemblage contributes to the delineation of the city's becoming.

## 2. Cities of Assemblages

Since this research considers the co-constitution of urban water, urban infrastructures, planning knowledge, urban entrepreneurialism, and urban informality during Taipei's urbanisation, the diverse processes by which this city was formed can no longer be abstracted by one concept without leaving most of the lively, vibrant constituents unattended. This project thus adopts assemblage theory as the approach to illuminate the interweaving process of Taipei's becoming. With the scope that assemblage theory offers, urban formation could thus be seen as the co-constitution and entwining of different urban entities along the spatio-temporal and socio-material process through urbanisation.

Before visiting the works on urban assemblage, this chapter will first situate urban assemblage in the major debates of urban study: global city, ordinary cities, and comparative urbanism. This chapter begins with a brief review on how Robinson (2006)'s *Ordinary Cities* argues against the common repertoires of urbanisation, which categorises cities by the presumed tags of 'global', 'world', or 'developed', 'underdeveloped'. Instead, the ordinary cities perspective offers an alternative vision seeing all cities as the urbanisation of their own kinds, and reckoning all cities as contributors toward the understanding of 'the city', instead of locating some at the producing end of urban knowledge whilst viewing others as being on the receiving end. This chapter then goes on to introduce assemblage theory, the main ideal of this philosophy, and how it may contribute to the current urban study.

## **2.1. Cities in Plural Terms**

In the last ten years urban study has undergone a major shift toward a post-structuralist understanding of cities. Departing from the focus on global cities, which emphasises cities' role of 'command and control' in the globalised world's economic system, Urban studies has now become more diverse both in terms of ways of looking at the city, and the objects that are being assessed. Urban study today is moving beyond the ideal of one dominant theory such as globalisation or capitalism, and is leaning toward a more 'grounded' way of understanding each city's becoming through their unique historical context. Urbanisation has thus been re-imagined as constituting more than one form originating in the West, and is instead understood as a diverse, multiplying process that should be recognised on its own terms.

### *2.1.1. Ordinary Cities*

Urban studies since the end of the last century has been obsessively focusing on the topic of globalisation and the role of cities in the new economic order. Cities, in different bodies of work, were imagined differently. While some studies view cities as the new local powers emerging along with rising global economic power, and the hollowing out of the state (Brenner and Theodore, 2002a, Brenner, 2004), others consider cities as the nodes in a global network, or even a global hierarchy (Friedmann, 1986, Taylor, 1997, Sassen, 2001), through which some cities (e.g. New York and London) obtain the power to 'command and control' other cities through economic dominance. The latter had a pivotal influence on contemporary urban study.

Through being proposed by Sassen as a neo-Marxist critique of the unequal power relation between cities, the ideal of global cities nonetheless was soon turned into the science of calculating and ranking; deciding on the criteria to be adopted in the characterising of ‘global cities’. Furthermore, these criteria were then translated worldwide as a developing strategy, and adopted as policy guides for the cities to follow in order to make their way up through such a hierarchy (Smith, 2013). While the global cities network became widely employed, it soon received many critiques, mainly from post-colonial and post-structural theorists.

First, from a post-colonialist point of view, the way global city theorists concentrated on particular cities appeared to be too parochial, embedded within the assumption of universalism. Jennifer Robinson (2002, 2003) in her works pointed out that due to our knowledge of urban being mainly derived from the Anglophone urbanisation experience (e.g. Paris or Chicago), our understanding of the urban was thus mainly derived from this specific type of city, and this leads to a parochial view of the city, as stated by Chakrabarty (2009):

*‘That Europe works as a silent referent in historical knowledge becomes obvious in a very ordinary way. There are at least two everyday symptoms of the subalternity of non-Western, third-world histories. Third-world historians feel a need to refer to works in European history; historians of Europe do not feel any need to reciprocate. [...] “They” produce their work in relative ignorance of non-Western histories, and this does not seem to affect the quality of their work. This is a gesture, however, that “we” cannot return. We cannot even afford an equality or symmetry of ignorance at this level without taking the risk of*

appearing “old-fashioned” or “out-dated”’(p. 28).

Such a Europe-American focus tends to produce urban theories from the Western context, risking explaining all cities, including cities from non-Western contexts, from within this same Western perspective. Robinson points out such parochialism is due to the concept of modernity, which was often confused with its Western origin:

*‘The city has performed an important function in theorizing modernity: it has coalesced and helped to make visible a certain range of self-descriptions for western societies. Similarly, though, the idea of modernity has underpinned accounts of the city through the 20th century. But in this double move, the idea of an urban modern has been intertwined with a counterpoint, the idea of the primitive. Running through so many accounts of the emergence and character of urban life in western contexts has been the convenient category of the primitive, which has worked to create the fiction that these cities are modern. This category has enabled a specific form of urban modernity to become hegemonic within urban studies, by counterposing cities in wealthy western places (which are modern, urban, advanced, rational) with other parts of the world, and other times (which are traditional, rural, primitive, irrational). By extension certain cities, troubled by tradition and rurality, come to be seen as not properly urban or modern.’ (Robinson, 2004, p. 711)*

Such a parochial view of urban modernity entwined deeply with developmentalism, which sees Western modernisation as the only path for less developed cities – usually from the Third World – to progress to a more advanced status. Since the assumed entanglement of Western Modernity and urban development had ‘*sedimented into*

*universalising theories of cities*' (Robinson, 2003, p. 39), it has led to the common prejudice to '*apprehend non-Western cities through a static, non-dialectical lens of categorisation*' (Robinson, 2003, p. 39), casting other forms of urbanisation as primitive, tradition, even backward, hindering our imagination and apprehension of cities of different kinds (Robinson, 2003, 2006).

To make urban study more cosmopolitan, Robinson thus further developed on Amin and Graham (1997)'s ideal of the ordinary city, which appreciates the heterogeneity of urban life, pleading for a more cosmopolitan view of all forms of cities. As in her own words:

*'[O]rdinary cities can be understood as unique assemblies of wider process – they are all distinctive, in a category of one. [...] and learning much from global- and world-cities approaches, ordinary cities exist within a world of interactions and flows. [...] Ordinary cities, then – and that means all cities – are understood to be diverse, creative, modern and distinctive with the possibility to imagine (within the not-considerable constraints of contestations and uneven power relations) their own futures and distinctive forms of city-ness'* (2006, p. 109).

Therefore, to view cities as ordinary cities in this sense is to imagine cities differently (Huyssen, 2008), to approach cities, especially from the Global South, with local perspectives which may develop through different lines comparing to the lines of Western urban theories (Roy, 2009a).

To seek a diverse comprehension of urban life, the second critique ordinary cities launched on the global cities study is therefore – in Smith (2013)'s word – its

economism. Since the major body of works in global city study seems to focus on the economic relation between cities, other cities along with other forms of urban life were thus excluded from this totality of global capitalism, for they were being economically irrelevant. In this sense the whole city was defined by only a fraction of its economic activity. As pointed out by Taylor: *'the research is very big geographically – global - but very narrow in topic'* (2003b, p. 3, see Robinson, 2005, p. 579). Such partiality toward the globalised economic activities in urban areas restrains the global city study from a more manifold, vigorous conception of urban dynamics. Massey (2007) has also made a similar critique:

*'The manoeuvre of highlighting only one part - and often only a small part - of the urban economy is typical of global-city discourse. It is a strategy of synecdoche, where the part is made to stand in for the whole. So London and New York are classified as global cities on the basis of their finance and associated industries; but that is a characterisation that obscures all the other vital elements of their economies and societies' (p. 41).*

To understand cities only through categorising, ranking a part of cities' economic performance is to presume the function of cities was entirely decided by their position in the global economic system. The multifarious, complex urban forms whereby the urban elements such as culture, community, politics, nature, and materials were formed thus were left out. Such economic totality also leads to the third critique of global city study: *In what sense does city as a space function within globalisation?* Since the global network study focuses on the connection between producer service firms (Beaverstock et al., 1999, Beaverstock et al., 2000), the data of the connection



between cities was actually locational or attribute data of the firms based in the cities (Short et al., 1996). As state by Taylor (2003a): *‘The key point in this assumption is that it is the firms that are creating the flows and therefore it is they who define the world city network’* (p. 33). Since the intra-firm relation was predefined as the key element that makes the city global, it fell short in amplifying its relations with other urban flows (e.g. environmental, social, political). That is to say, since the global city theory attributed the power to the business firms, other parts of the city were considered irrelevant to the globalised urban economy. City, in this sense, was treated as being ‘hollowed out’, gradually losing its power to the global economic force while political economists suggest otherwise. In their works on neoliberal urbanism, political economists (Brenner, 2004, Brenner and Theodore, 2005, Peck et al., 2009) scrutinise cities’ roles, recasting them as the strategic targets for neoliberal policy experiments. In this sense, urban regions were re-learned with regard to their complex re-territorialisation processes in local politics and the global economy. Apart from neoliberal urbanism, a more relational view of the city was also introduced in urban study. Refusing to see the city as a pre-existing spatial category or pre-fixed, enclosed territory, many urban geographers (Swyngedouw, 1999, Kaika and Swyngedouw, 2000, Graham and Marvin, 2001, Amin and Thrift, 2002, Gandy, 2005) attempted to re-discover the city through the interweaving of different urban flows. In Robinson (2005)’s words:

*‘The territorialization of economic activities, political relations and place-based social identities offers opportunities to engage with the city as both a place (a site or territory) and as a series of unbounded, relatively disconnected and dispersed,*

*perhaps sprawling and differentiated activities, made in and through many different kinds of networks stretching far beyond the physical extent of the city. The spatial imagination adequate to capturing cityness – in its diverse forms - must necessarily be multiple and sophisticated. Networks and localized clusters; boundaries and globalizing flows; communities of responsibility as well as divisive social fragmentation: cities are all these and more’ (p. 763).*

Robinson’s ground-breaking work on ordinary cities thus transforms the landscape of urban study. It triggers wide range responses in urban study and initiates many diversified attempts for re-approaching the cities. Among the two perspectives having influenced the research topic of this thesis most: Comparative Urbanism and Urban Assemblage.

### *2.1.2. Thinking the Urban Comparatively*

Seeking to learn about urbanism from more diversified perspectives, Robinson (2006) mobilises the resource of comparative urbanism towards a post-colonialised urban study. Comparative urbanism initially emerged in 1960s as the critique - mostly made by anthropologists of the Chicago School - of treating the city as one unified system, while losing its sight of the verified urban contexts from cities outside of Europe or North America. Though aiming for more variegated forms of urbanism, the possibilities of comparative urban study were soon limited by its embedded developmentalist view, which categorised the world into developed and developing countries both epistemologically and institutionally, restraining the comparison between cities of different groups from being made (McFarlane and Robinson, 2012).

Developmentalism circumscribes the cases of urban study by two reductionist views. First, the assertion that there are universal rules common to all cities in the world. This view ignores the fact that these ‘urban theories’ were mostly grounded in Western cities, and were built on the bases of relatively limited urban experiences. Even in the cases that these theories are being applied to cities of different contexts, these cities were treated merely as the added on ‘facts’ or ‘data’ used to verify the Western master theory (Harris, 2008, Robinson, 2011a), instead of being treated as opportunities to understand cities from different parts of the world. The second, if not worse, flaw of the developmentalist view is to see different cases as simply the deviation or ‘un-fitness’ of the pre-existing urban theories, and thus label it as ‘Asian’ or ‘Southern’ without any further scrutiny (Abu-Lughod, 1975, see also Jacobs, 2012), as if ‘*spatiotemporal context is merely residual in the explanation of social phenomenon*’ (Nijman, 2007, p. 2).

Having said that, with the emergence of the globalisation debate, comparative urban studies was once again brought back into the spotlight the excavating of diverse urban forms across the world. In her work, Robinson amplifies the causality assumption made in different comparative strategies, urging to the researchers to compare the cities that were usually seen as falling into different historical, political, and economical categories in order to unveil the hidden causality that was usually covered by the common urban storylines:

*‘In urban studies, formal comparative methodologies often enact a quasi-scientific model of causal relationships and explanation. Variables are identified — some independent (causal) and some dependent (reflecting*

*outcomes shaped by independent variables) — and it is assumed that relationships amongst these variables can be hypothesized using existing empirical and theoretical knowledge, that empirical referents for these variables can be identified and specified precisely in order to be tested by means of data that is then gathered using robust, reproducible methods of enquiry. While these procedures and assumptions are logical and apparently rigorous, and certainly produce interesting and generative research, they can be limiting both in terms of the kinds of processes that can be investigated and in terms of the range of forms of causality that can be explored' (Robinson, 2011a, p. 17).*

In that sense, the delivery of comparative urban study has been encouraged across contexts that would usually be grouped into different categories, seeking the theorisation of complex, plural causalities that shape the cities in a decentralised perspective. Then, if we are to understand cities at the same time as rejecting the ideal of one universal phenomenon or a grand theory that concludes them all, what does comparative thinking have to offer? To McFarlane, comparison is actually a way to learn about the city. In other words, while we learn about new urban knowledge, we always come back to particular referents in our minds. As McFarlane puts it:

*'[I]f we are interested in theorizing abstractions like 'the city' or 'the urban condition', then it is difficult to imagine how comparison can be anything other than an inevitable and important site of consideration. Attending to our implicit comparisons reveals some of the assumptions we make when we speak or write of the city or urbanism. For example, our conceptions of the city are often premised on the experiences and theoretical work based upon cities in Western*

*Europe and North America, and cities outside of the 'global North' are thus often understood in relation to those referent objects' (McFarlane, 2010, p. 726).*

He points out that under the geopolitics of the Cold War framework, the international power regimes (e.g. World Bank), along with the European-centred urban knowledge they institutionalised, were conceived of as the policy exporters, the providers of solutions for the problems 'out there' in the Third World through inter-city partnerships or foreign aids (see also Clarke, 2012). Under these circumstances, only a few cities in the Global North became the motherland of urban theories, leaving most Southern cities out of the knowledge production process (McFarlane, 2006, Appadurai, 2000). To McFarlane, it is exactly such parochial grasping at urban nature that should be decentralised, pluralised, and provincialised. Therefore, the awareness of urban learning as a comparison could initiate the critically reflexive process of re-figuration toward the power relations between different groups:

*'I consider comparativism as a research method, but more importantly as a mode of thought and as a strategy for international urban studies. Comparative thinking can be a strategy firstly for revealing the assumptions, limits and distinctiveness of particular theoretical or empirical claims, and secondly for formulating new lines of inquiry and more situated accounts. As a strategy of critique and alterity, comparativism depends, in part, on a continuous process of criticism and self-criticism. One route to conceiving comparison in this sense — and there are, of course, other possible conceptions — across the North–South divide is to attend to questions of comparison-as-learning and, in particular, to an ethico-politics of learning through different theory cultures' (McFarlane,*

2010, p. 726).

By adopting comparativism as a mode of thinking about the city, urban theories could thus be re-contextualised within the processes by which urban knowledge is produced, instead of only being recognised as a generic form. Only through disrupting the existing, fixed knowledge set we have for making sense of cities, can we thus do a particular city justice, understanding its own cultural, material character in its own right. As McFarlane further argues:

*'we might imagine specific forms and uses of comparison as outlined here as a critique that is not neutral but that seeks to unsettle and destabilize knowledge and theory as it is produced, and that seeks to reconstruct and develop new lines of inquiry amongst a range of personal, institutional, historical and cultural inscriptions and constraints. At its most broadly cast, comparison as a strategy of critique and alterity entails the possibility of transforming not just theory, claims and knowledge, but the very objects of comparison we arrive at'*  
(McFarlane 2010, p,738).

Comparative thinking drives away the previous attention given to urban study, which approached the city by looking for universal laws, but instead calls for a more localised perspective, which is to relearn the city without making reference to the existing narratives, typologies, and any other assumed knowledge, while at the same time staying aware of how we construct our knowledge of the urban. For example, in Harris' (2008) comparative perspective on gentrification in London and Mumbai, instead of accentuating the global capital flow of an emerging urban middle class, the author illustrates the active role of public policy in the forming of Mumbai's

gentrification. Such comparative perspective projects (Lin, 2007, Cook and Ward, 2012, Minnery et al., 2012, Waley, 2012, Harris and Moore, 2013) could be used as a source in the learning of ‘global phenomena’, shedding light on more diversified understandings of cities of all kinds. On that account, if we are to reveal the metropolis as more than our presupposed knowledge of ‘the city’, we must depart from the usual categorising process, in order to reimagine the city as an open, assembling process of different flows: institutions, people, urban infrastructures, economic flows etc. This perspective leads us to another key issue in current urban study – thinking of cities as assemblages.

## **2.2. Delineating an Un-Totalised City**

Along with the development of comparative urbanism, urban studies has increasingly been committed to investigating cities’ multiplicity, instead of chasing the singular, over coded explanatory framework. The Deleuzean notion of assemblage, under the circumstances, was able to offer an alternative philosophical ground for the city’s heterogeneity. Following his work on comparative urbanism, McFarlane further suggests that it is important to recognise the city by looking into its ‘urban learning assemblages’ (McFarlane, 2011c). Emanating from Amin and Cohendet (2004)’s work on the construction of knowledge, McFarlane regards learning as the formation process of the urban:

*[...] knowledge is located in space and time and situated in particular contexts; it is mediated through language, technology, collaboration and control; and is constructed, provisional, and constantly developing (Amin and Cohendet, 2004,*

*p. 30). Most importantly, if knowledge is the sense that people make of information, that 'sense' is a practice that is distributed through relations between people, objects and environment, and is not simply the property of individuals or groups alone (ibid.). [...] Learning is a name for the specific processes, practices and interactions through which knowledge is created, contested and transformed, and for how perception emerges and changes. [...] I conceive learning as a distributed assemblage of people, materials and space that is often neither formal nor simply individual. [...] Rather than being confined to the individual, learning as a process is distributed through relations between people–materials–environment' (McFarlane, 2011c, p. 3).*

In other words, learning is the interaction process between humans and the environment, situated in a specific spatiotemporal context on which people mediate the information bases.

According to McFarlane, learning in urbanism can be perceived as three processes: translation, through which space and actors are able to co-mediate the production of travelling knowledge; coordination, the socio-material adaptation through which the arrangement between individual and environment can be situated; dwelling, through which learning '*entails shifts in perception, a way of seeing that is haptic – sensed, embodied, practised – and which positions learning as a changing process of perceiving how to use the affordances of documents, objects and situations.*

*(McFarlane, 2011c, p. 21)*', that is, how learning is lived. However, since the urban learning process is the co-constituting of actors from different domains—people, sources, and knowledge, the understanding of urban space can thus no longer be



decided by spatial proximity. Rather, urbanism should be re-imagined as the composing process of social, political, economic and cultural actors; as an assembling process.

### 2.2.1. *Assemblage Thinking and Space*

Assemblage has been widely adopted in geography in recent years. In DeLanda (2010)'s view, the Deleuzean idea of assemblage is an alternative theory to organic totalities, which see structure and agency as a seamless whole. As he cites:

*'We no longer believe in a primordial totality that once existed, or in a final totality that awaits us at some future date. We no longer believe in the dull grey outlines of a dreary, colorless dialectic of evolution, aimed at forming a harmonious whole out of heterogeneous bits by rounding off their rough edges. We believe only in totalities that are peripheral. And if we discover such a totality alongside various separate parts, it is a whole of these particular parts but does not totalize them; it is a unity of all of these particular parts but does not unify them; rather, it is added to them as a new part fabricated separately'* (Deleuze and Guattari, 2004, p. 42, see also DeLanda, 2010, p. 3).

An assemblage thinking toward the world is a rejection of reductionism, which is often criticised for its disregard of the heterogeneity within things. DeLanda (2006) proposes three features to illustrate assemblage. First, assemblage emphasises 'relation[s] of exteriority', which means the component parts of an assemblage have certain forms of autonomy: *'[...] a component part of an assemblage may be detached from it and plugged into a different assemblage in which its interactions are*

*different*' (DeLanda 2006, p. 10). That is to say, the component parts can neither define the whole, nor they are defined by the whole. An assemblage is defined by its *emergent property*, '*the properties in the whole that are not present in its parts*' (DeLanda, 2010, p. 3). Through actually exercising their capacity, the relation of parts may change without the terms changing, and this would appear as the potentiality of the relation. The linkages between components are not logically necessary, but contingently obligatory, therefore this linkage can be understood as '*the historical result of their close coevolution*' (DeLanda, 2006, p. 12). Second, DeLanda (2006) draws attention to the processes '*in which these components become involved and that either stabilize the identity of an assemblage, by increasing its degree of internal homogeneity or the degree of sharpness of its boundaries, or destabilize it. The former are referred to as processes of territorialization and the latter as process of deterritorialization*' (p. 12). Therefore, to understand an assemblage is not to address the properties of the 'whole' nor of the constituents that compose the assemblage, but to enquire into the territorialisation process of the constituents, the transforming of the assemblage. The territorialisation can be understood as the first articulation of the assemblage, which concerns the formed materiality, which includes the physical characters of the components that are involved in their interaction. In the case of the community meeting, the materiality of this assemblage includes the character of the human bodies they apply for making conversation, the paper or blackboard they use to list the main points of their conversation, the building they are situated in for their physical acquaintance. The second articulation, which DeLanda (2010) holds as coding, is the material expressivity, which could further stabilise the assemblage

through a shaping of identity among the components via the linguistic expressions like words, and symbols, or the non-linguistic ones like gesture and choice of clothes. According to DeLanda (2006), coding/decoding is the process ‘*in which specialized expressive media intervene, processes which consolidate and rigidify the identity of assemblage or, on the contrary, allow the assemblage a certain latitude for more flexible operation while benefiting from genetic or linguistic resources*’ (p. 19). With such a double articulation view, assemblage theory is thus able to see things as produced by particular socio-temporal contexts, as DeLanda (2010) puts it:

*‘all the entities that populate the world come into being through specific temporal processes that affect both their materiality and their (nonlinguistic) expressivity. All identities are, in this sense, historical, as long as the word is used to refer not only to human history but to geological, biological, and even cosmic history. This constitutive historicity implies that objective entities are inherently changeable: they may undergo destabilizing processes affecting their materiality, their expressivity, or both. In other words, they may be subject to processes of deterritorialization and decoding’* (p. 33).

It is exactly this attentive focus on the double articulation of ‘things’ that brings the assemblage to the attention of geographers. Since the emergence of post-structuralism changed the course of geography at the end of the last century (which will be further discussed in Chapter 4), the imagination of space has moved from one primarily fixed on an enclosed territory to a more relational recognition of spatial effects. Assemblage theory therefore enables us to rethink space in a more heterogeneous form. First, as Anderson and McFarlane (2011) have put it: ‘*assemblage emphasises spatiality and*

*temporality: elements are drawn together at a particular conjuncture only to disperse or realign, and the shape shifts – as anthropologist Tania Murray Li (2007, p. 265) has put it – according to place and the “angle of vision”*” (Anderson and McFarlane, 2011, p. 125). Rather than seeing things in an abstracted form, assemblage demands an empirical focus on the territorialisation, offering a situated scope to delineate the agglomerating, co-functioning, and dispersing of elements (Anderson et al., 2012b). Second, by perceiving each component part of an assemblage as autonomous, the multiple elements in the assemblage thus could be seen to have equal status in the trajectory of the assemblage (Anderson and McFarlane, 2011). Also, the exteriority of relations between an assemblage and its component parts distinguishes assemblage theory from the actor-network theory (ANT) by emphasising potentiality in the assembling process (McFarlane and Anderson, 2011, Saldanha, 2012). In Delanda’s term, what differentiates ANT and assemblage theory is the logically necessary relation between the actors of ANT, and the contingently obligatory relation between components of assemblage (see Anderson et al. 2012b). In the case of urban studies, the economic reasons and local political struggles thus could be seen as part of the shaping force of the city, as well as the force of water, urban infrastructures, technocrats, and historic contingents of the city. Third, assemblage thinking decentralises the Foucauldian focus on the power of apparatus and regime by exploring the plurality of power in the transformation of the assemblage (Anderson and McFarlane, 2011, Legg, 2011, Allen, 2011). Fourth, assemblage thinking emphasises the highly unsteady relation between component parts in a process: this offers a more vibrant perspective on the dynamic processes through which cities are

made (Legg 2011, Anderson and McFarlane 2011). In the light of the assemblage theory that examines cities in a procedural way, Anderson and McFarlane (2011) thus further proposed employing assemblage in three different ways: as a descriptor, a concept, and an ethos. Using assemblage as a descriptor means: *‘to understand assembling as a process of ‘co-functioning’ whereby heterogeneous elements come together in a non-homogeneous grouping’ (Anderson and McFarlane, 2011, p. 125).*

Through illustrating the co-evolution of materials, humans, policies, and other elements in a particular space, we could gain a clear, contextualised sight of a spatial issue, such as neoliberal urbanism, which would be further addressed later. As a concept, assemblage places *‘emphasis on the process of arranging or fitting together a set of heterogeneous elements that the French agencement has and the sense that assemblages are provisional contingent wholes (Braun, 2008, see also Anderson and McFarlane, 2011, p. 125).* In other words, assemblage as a concept emphasises the processes by which heterogeneous elements were held together across differences and contradictions (Greenhough, 2012, Allen, 2011). For example, in his work Saldanha (2012) deems assemblage theory as a gateway for a more daring way for speculating on the unlikely connections between things, especially their relations to sexual differences and instincts. In his words: *‘One could show how masculinist desires driving the Wall Street assemblage lead to food shortages in Africa and Asia’ (p. 197).*

Fifth, as an ethos, assemblage involves *‘experiments with methodological and presentational practices in order to attend to a lively world of differences (Swanton, 2010, Lorimer, 2010). Montage, performative methods, thick description, stories – all have been used by geographers and others in an attempt to be alert to processes of*

*agencement*' (Phillips, 2006, Stewart, 2007, Swanton, 2010, Anderson and McFarlane, 2011, p. 126). Such orientation opened up more possibilities for approaching the fragile conglomeration of heterogeneous things. These experiments not only grant each component in the assemblage a more autonomous status against the totalising of the whole, but more importantly, they also offer a fresh sight on how different entities are held together, how they sustain their durability as a constellation, or fall apart (Anderson et al., 2012b). By adopting assemblage as descriptor, as a concept, and as an ethos, assemblage echoes the plea to reimagine space as the entwining of various flows since the relational turn. Urban study thus benefits tremendously from assemblage thinking.

### 2.2.2. *City as Assemblage*

By viewing assemblage as some renewed version of ANT, Farias and Bender (2010) argue that ANT's rejection of the structuralist view on space sheds new light on the assemblage approach to space. As their characterisation of space is expressed:

*'[Space is] not an underlying structure produced by capital relations (Smith, 1992) or state strategies (Brenner, 2004) or whatsoever. Thinking space and scale as a product which somehow becomes independent from the set of practices that produced it (what structuration ultimately means) would involve falling into that trap of fetishism, in the Marxian sense of taking for real and ontologically autonomous what is rather an attribute of particular actor-networks and urban studies. Space, scale and time are rather multiply enacted and assembled at concrete local sites where concrete actors shape time-space*

*dynamics in various ways, producing thereby different geographies of associations. [...] Sites are defined not by spatial boundaries or scales, but by types and lines of activity, and spaces emerge through the networks connecting different sites' (Latour, 2005, p. 6).*

In that sense, ANT echoes the previous urge to draw away attention from particular paradigms or master theories such as global cities, and to instead re-think the city as *'not a whole, but a composed entity. We surely err if we start with an assumption that the city is some kind of whole, a totality, represented as a bounded or at least an identifiable territorial space that gives shape to social relation' (Farias and Bender, 2010, p. 304)*. Assemblage thus was employed by them as empirical description, a methodological tool for emphasising the multiplicity of the city, inquiring into the diverse, multiple engagements of urban entities from different domains: materials, travelling urban policy, knowledge etc. (Fariás, 2011). Adopting assemblage thinking in the understanding of urban learning, McFarlane (2011c) urban learning assemblage departs from three points: First, as an orientation, assemblage emphasises the role of the historical trajectory that shape urban politics and economy, people's behaviour, and the way things were forged together. Also, by stressing the relations of exteriority, assemblage also sees things in an emergent manner, drawing attention to the contingent, momentous encounters of events, and the potentiality of how things might otherwise be. According to McFarlane, it is exactly such focus on contingency that distinguished assemblage from the ANT. Citing Ong (2007)'s scrutiny of assemblage thinking: *'Although assemblage invokes nexus, it is radically different from concepts such as 'network society' or 'actor network theory' that seek to describe a fully*

*fledged system geared toward a single goal of maximization. [...] The space of assemblage is the space of neoliberal intervention as well as its resolution of problems of governing and living' (p. 5).* McFarlane (2011c) argues that while assemblage theory and ANT both attempt to confront the complexity of the sociomaterial relationality of the world, it is nonetheless the attending to change and rigidity, the openness to all kinds of possibilities, that delimits that feature of assemblage thinking. Second, as a concept, assemblage serves to redefine space, '*not as simply a spatial category, output, or resultant formation, but as a process of doing, performance and events. There is no necessary spatial template for assemblage; the spatiality of assemblage is that of sociomaterial alignment, which brings into view a range of spatial forms, from those generated by historical processes of capital accumulation and social polarization, to random juxtapositions and disruptive events, and predictable daily and nightly rhythms of activity, atmosphere and sociability'* (McFarlane, 2011c, p. 26). The spatiality of the city thus would be conceptualised as procedural, relational, mobile, and unequal in the everyday lives of people; engaging not only the socio-material entwining during the process, but also translocal involvement through the co-constituting of various actors (McFarlane, 2011b). This requires an attentive focus on the processes of which the parts of urban learning assemblage co-constitute the whole, while at the same time defining one another. Third, with assemblage thinking, McFarlane (2011c) aims to discern the unequal power relation of the city. By demarcating the territorialising process of the city, the differential influences of each component in the urban assemblage thus could be spotted. These three ways of using assemblage to approach the city, it was argued,



also resonated with critical urban theory. While critical urban theory focuses on the political economy of urban inequality, the descriptive orientation of assemblage provides not only the historic view of how different actors were drawn together through the spatio-temporal processes, but also emphasises the potentiality of change as each event and moment that new actors encountered resulted in new relations being formed (McFarlane, 2011a, Rankin, 2011). Meanwhile, since assemblage emphasises the agency across human and non-human objects, the power of materials thus could be recognised through the trajectory of urban forming (McFarlane, 2011a). Since urban assemblage offers a situated view of the becoming of the city, it also provides a diverse imaginary of the city, fuelling Robinson (2006)'s plea to see cities as ordinary cities (McFarlane, 2011a). Having said that, the application of assemblage in urban study has undergone some criticism for its commitment to describing the process instead of offering explanations. Unlike ANT's focusing on the agency of some particular actors, assemblage in Allen (2011) opinion could be used as merely a 'simple joining-up exercise':

*'If we succumb too readily to the ontological certainty that the world is heterogeneous, multiple and contingent, it can be all too easy to follow our senses and piece together what, following Clifford Geertz (1993, and before him Gilbert Ryle 1971), can best be described as "thin description" [...] There are, to say the least, tensions and contradictions, clashes and displacements, which may defy any self-evident arrangement, yet such things could well account for how divergent spatial and temporal orders hang together in practice' (p. 156).*

To him, the lack of conceptualisation - taking things for granted, risks losing sight of

the conflicts that are taking place in the world. Since conceptualisation is part of the process of making sense of the phenomenon, and initiating critical debates, leaving things un-analyzed could restrain critical questions from being conceived and being raised. The thick description in assemblage thinking, therefore, should be applied sharply to open up new questions, rather than leading to endless describing of what we may already know (Allen, 2011). Brenner et al. (2011) further criticise the post-structuralist tendency of assemblage thinking for rejecting the ‘bigger map’ of socio-spatial context that urban spaces were embedded in as ‘naïve objectivism’, which ignores the hierarchical social relations and institutional forms of capitalism. To critical urban geographers, the political economic perspective not only contributes to uncovering the issues of urban inequality and conflicts, but more importantly, it puts things into perspective, facilitating the formation of critical discussions. While the non-human agency of the city has been and continues to be widely covered by political ecologists (Gandy, 2005, Kaika, 2005, Heynen et al., 2006, Swyngedouw, 2006a), urban assemblage brings some attention to materiality but at the same time strips the key explanatory tool away for further scrutiny. In response to such critique, Farías (2011) emphasises that approaching the city merely through repeatedly revisiting the already asserted explanations of the urban phenomenon without initiating a new ontological inquiry toward it could be even more naïve. As he puts it:

*‘The notion of urban assemblages instead allows us to think about spatial formations as products that must be constantly defended, held together, maintained and repaired. Rather than an underlying structure or a structural context, space thus appears as a relational effect. And this, again, makes it*

*necessary to change the focus from “the” space of the city to the multiple urban assemblages in which urban topologies are made and remade’ (Fariás, 2011, p. 370).*

Echoing the early call for thinking of space relationally (see Chapter 4), urban assemblage not only offers a more multiple focus on human, culture, economic - as well as urban - infrastructures, water, policy mobility (ultimately providing a new approach to contemporary urban life); but it also initiates new questions concerning the city’s becoming, and the new possibilities that come along following the introduction of new technologies and knowledge (Fariás, 2011). McFarlane (2011d) in the same volume also characterises the urban assemblage and the political economy as not mutually exclusive tools in urban study. Rather, urban assemblage offers multiple ontological grounds from which cities can be seen as urban assemblages ‘*viewing assemblage thinking as both a process of assembling urbanisms through multiple socio-material histories and processes, and a name for particular urban objects—from policy and housing to social movements and infrastructure: the urban world, in short, composed by a series of overlapping socio- material assemblages’ (p. 377).* To him, urban assemblage does not reject any explicit claims about the city’s formation, but it aims to enable different positions in urban study to jostle, collide, and pose different questions toward the city. McFarlane (2011d) further using Gidwani (2008)’s book, *Capital, Interrupted*, as example, argues that capitalism is not a centralised totality, but parasitic:

*‘it operates not just conditions for (dis)investment, accumulation and economic conduct but for moral conduct too; it is regulated by a cultural politics of work*

*that inflects how value becomes variously attached not just through class fractions but in religious, ethnic and caste relations in the negotiation of work conditions, payments, social distinction and ethics; and it is reassembled through nonhuman relations—the circulation, internment or persistence of waste, or the vagaries of climate, land, agriculture, food prices and weather, as well as histories of land settlement policies and infrastructural engineering. [...] Here, capitalism is structured not by an essence or the primacy of a centre, but by multiple logics that interact with one another and are entangled in and entrench social hierarchies’ (McFarlane, 2011d, p. 378).*

Therefore, what assemblage theory has to offer is a heuristic device for thinking how the multiple processes of value forming or capital accumulation are held together, disrupted by socio-material agency, and, ultimately, disassembled. By following the multiple processes of urban formation, the ‘context of context’ could thus be captured through the thick description of the historical formation of the city, instead of being oblivious to it, as in Brenner et al. (2011) critique. Through the description of urban formation, some entities will appear as more important than others, affecting the assemblage to a larger extent, but they should be distinguished as the describing goes on, instead of being assumed prior to the scrutinising process. The potentiality of each entity separately and together was delimited in detail in Harman’s object-oriented theory, which treats all things – the part and the whole, from the concrete one to the more abstract one – as objects.

### 2.2.3. *Objects in the Assemblage*

Recently, Harman's object-oriented philosophy has triggered a wide discussion. The forces of things were reconsidered as the key power that orchestrates the socio-material world. Objects, in Harman's account are the '*unified entities with specific qualities that are autonomous from us and from each other*' (Harman, 2011a, p. 22). Such a view of an object eliminates the division between human subject and object. Instead, it views all things as objects, regarding them as capable, full of possibilities that could actively change vibrant processes in the socio-natural world. Grounding his 'unorthodox' commentary in Heidegger, Harman reckons that Heidegger's philosophy 'give[s] birth to an ontology of *objects themselves*' (Harman, 2002, p. 1, emphasis original). To him, Heidegger's understanding of objects as readiness-to-hand offered a different angle. '*Readiness-to-hand (Zuhandenheit) refers to objects insofar as they withdraw from human view into a dark subterranean reality that never becomes present to practical action any more than it does to theoretical awareness*' (Harman, 2002, p.1). In that sense, human interaction with objects, be it intellectual or manipulative, could never comprehend the hidden strength of objects, nor could any other objects. As for inanimate objects themselves, they '*are not just manipulable clods of matter, nor philosophical dead weight best left to positive science. Instead, they are more like undiscovered plant, stony or gaseous worlds which ontology is now obliged to colonize with a full array of probes and seismic instruments - most of them not yet invented*' (Harman, 2002, p.19). In this sense, the power of objects exists without human handling, but lays in their being. Such a point of view on objects was known as the 'speculative turn', which moved beyond the Kantian Idealist view that

sees the world as humanly constructed, and returned to the Realism that was once ignored by contemporary continental philosophers (Bryant et al., 2011). Under such a realist turn, inanimate objects were thus granted an equal ontological basis as humans, regarded as capable, and as having consequences (Latour, 1993, Harman, 2009).

Another feature of the speculative turn is the irreductionism as proposed by Latour, which strongly rejects to reducing things entirely to any others (Latour, 1993, Harman, 2009). Further emphasising the issue, Harman argued that both undermining and overmining would compromise our understanding toward objects. Undermining means breaking things into their components as a way to capture their characters. Such a reductionist way of approaching objects sees things as derivative, as if objects are too superficial to be the truth, so they have to gain their reality from elsewhere (Harman, 2011a, Harman, 2011b). Overmining, on the other hand, is to reduce objects upward, seeing them as *‘useless fictions compared to with what is truly evident in them - whether this be qualities, events, action, effects, or givenness to human access’* (Harman, 2011a, p. 24). Such an irreductionist view of objects grants a focus on objects themselves, not as their components, nor their influences on humans. That said, the main contribution of Harman’s object-oriented philosophy is its view of objects as forceful, capable of revealing their potentiality through interaction with others. Harman’s viewing of potentiality as the hidden dimension of objects distinguishes his view from Latour’s which regards change in objects as being due to the mediation of others (Harman, 2009, Latour et al., 2011). It also offers a more concrete ontological basis for the understanding of objects as ‘heterogeneous but continuous’ that many Deleuzian philosophers (e.g. DeLanda) did not offer. By

granting more credit to objects themselves, a different angle for approaching materiality is unfolded in contemporary geography. In their recent works, many geographers (Meehan et al., 2013, Shaw, 2012, Shaw and Meehan, 2013, Ash, 2013) have urged approaching the world in an evental manner. By delineating the interplay of objects as they encounter each other, we do not merely bring materials back into the discussion of geography, but also actually re-constitute the world on a metaphysical level, providing a new ground for a non-anthropocentric understanding of the world.

### **2.3. Conclusion: Toward an Assemblage Thinking of the Urban World**

Since the earlier debates on global cities, urban geography has undergone a long journey toward a different imagination of the urban world. Through the development of ordinary cities and comparative urbanism, the focus on seeking a global city stereotype from the cases based in the Anglophone world has been broadened into the variegated understanding of contextualised cases from all parts of the world. With the redirecting of urban studies, the city was thus no longer conceived as an enclosed entity that contains particular types of economic, cultural traits, but instead was re-conceptualised as the diverse forming process engendered by different participants under different circumstances. Thinking of all cities as ordinary cities, as argued by Robinson (2006), in this sense overturns the once parochial urban study by seeing all cities as fruitful to the understanding of urbanisation. That being the case, assemblage was thus employed as the mode of thought for approaching cities on their own terms. Assemblage thinking not only offers an alternative ideal of space as the territorialising

of different urban actors, but also it provides a powerful tool for delineating how these urban actors co-function, interweaving into the spatiality that they individually cannot become. Assemblage thus roots for a multiple account of questions, rather than conflating the complex issues into one single explanation. Through the thick description it commits, city and urban issues can no longer be understood through conjuring up one abstracted force such as capitalism or neoliberalism, but instead should be re-learned through the down-to-earth, step-by-step assembling process of urban entities – human inhabitant, water, urban infrastructures etc., and the contingent disruption – floods, public financial deficit etc. Such a view of urbanism not only provides a more fine-grained perspective on the making of the city, but it also extends the discussion's focus from socio-economic actors to the material entities, making the argument more concrete and grounded. Given that this project of urban waterfront renovation incorporates various urban issues, e.g. urban informality, floods, public infrastructures, urban planning, and urban entrepreneurialism, assemblage theory provides a theoretical framework to delineate the meshing process of these urban constituents. By paying attention to the heterogeneity of the urban components, the forming of the city is no longer deemed the consequence of one dominant shaping force, such as neoliberalism or capitalism, but instead the gradual constellation of the relation built between the urban objects. This chapter has addressed the theoretical contribution of assemblage theory on urban study, elaborating on how its focus on the constituting process of urban objects may facilitate the discussion on the urban formation process. In the next chapter, I am going to demonstrate how exactly assemblage theory can be applied in the urban discussion by taking a closer look at



the urban socio-material relations.

### **3. Assembling the Urban Socio-material World**

In the last chapter, I reviewed how the contemporary landscape of urban study has been transformed by the comparative thinking of assemblage theory. With these conceptual tools, urban study had moved beyond seeking a particular process that bears the specific marks of ‘urbanisation’ to the mapping out of a more heterogeneous urban form. With the introducing of assemblage thinking, the interweaving of different strands of constituent, be it human, nature, power, knowledge, or ideology etc., could thus be decentralised in a more fluid form; function at different moments upon their encounters, and grow apart as they show different potentialities. In my project on Taipei’s urban water governance, three constituents of the current urban dialogue are engaged – neoliberal urban governance, urban water, and urban informality- can be conceptualised via assemblage theory. The first section of this chapter discusses how neoliberal urbanism shifts the current urban economical and political order from direct state intervention to a more market mediated urban entrepreneurialism. Moreover, with the insight from assemblage thinking, this section aims to amplify how neoliberalism can be understood as mobilised urban policies, travelling from one city to another, and co-evolving with cities into variegated forms. The second part of this chapter applies assemblage thinking into the discussion of urban water. Since assemblage theory is able to bridge the modern dichotomy of human/nature, water as an entity flowing through the human-nature world can consequently be seen as more than the production of human labour, as an object that is capable for expressing its features as it interacts with other constituents of the city. The third part of the chapter addresses urban informality, which can be seen as a part

of the urban assemblage at the same time as an assemblage itself consisting of human dwelling, housing regulations, urban governance, and people's mundane lives. By adopting assemblage thinking on urban informality, we can thus better capture people's interaction with their living environment, their institutions, and everyday encounters.

### **3.1. Tracking the Neoliberal Flows**

As mentioned in the last chapter, neoliberalism is one of the most commonly addressed concepts in urban debates since the end of last century. For many, it not only offers a clear explanation of the inequalities lying in the process of economic circulation (Peck and Tickell, 1994, Peck, 2001, Brenner and Theodore, 2002a, Peck and Tickell, 2002), but it has also further developed into a critique towards systems of socio-economic government (Rose, 1996, Larner, 2000, Larner, 2003). Having said that, neoliberalism, as with other master theories in social science, also endures many criticisms concerning its parochialism. This parochialism of urban study tends to theorise things based on the limited experiences of particular contexts (Robinson 2003); in the case of neoliberalism, the Anglophone cities. Therefore, this section aims to amplify how neoliberalism sheds light on the nature of urban studies, and how assemblage theory offers a different interpretation of the various forms of neoliberal urbanism. Before jumping to the discussion of how the post-structural turn transforms the dialogues of neoliberalism, I will start with a short introduction on how neoliberalism was conceptualised and used in urban study.

### 3.1.1. *The Almighty Neoliberalism*

Generally speaking, neoliberalism nowadays is conceived through three approaches (Clarke, 2008, see Weller and O'Neill, 2014). First, as 'neoliberalism-in-theory', neoliberalism is an abstract ideology that was employed by geographers to capture the drastic political-economical reform in the 1970s, when the earlier Keynesian economic development had come to a halt. In order to deal with the economic stagnation and the fiscal deficit, the Thatcher administration and the Reagan administration both started retreating from welfarism in the UK and the US, and instead commit to a laissez-faire strategy both economically and politically (Harvey, 2005). As Harvey has put it:

*'Neoliberalism is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices. The state has to guarantee, for example, the quality and integrity of money. It must also set up those military, defence, police, and legal structures and functions required to secure private property rights and to guarantee, by force if need be, the proper functioning of markets. Furthermore, if markets do not exist (in areas such as land, water, education, health care, social security, or environmental pollution) then they must be created, by state action if necessary. But beyond these tasks the state should not venture. State interventions in markets (once created) must be kept to a bare minimum because, according to the theory, the state cannot possibly possess enough information to*

*second-guess market signals (prices) and because powerful interest groups will inevitably distort and bias state interventions (particularly in democracies) for their own benefit' (2005, p. 2).*

Neoliberalism in this sense is highly abstracted, and is imagined as being at the core of the global-wide economical/political ideology, sprawling from the trans-Atlantic to every corner of the world through the mediation of international institutes like the International Monetary Fund (IMF) and the World Trade Organization (WTO).

Though this account of neoliberalism was and still is hugely influential, it was also well criticised for its parochialism, since the concepts formed in Europe and America cannot be used as explanations of the neoliberalising experiences in other parts of the world. This critique resulted in the second account of neoliberalism, which is to think neoliberalism in a more variegated form, with a more grounded discussion.

Unlike the 'neoliberalism-in-theory' that directly links the neoliberal ideology produced in a trans-Atlantic context with the different forms of neoliberalism in different parts of the world, 'neoliberal-in-general' sees neoliberalism as the collective of actual political forms, economic rules, and policies that share certain commonalities, which can be understood as neoliberalism (see Clarke, 2008, Weller and O'Neill, 2014). Instead of imagining neoliberalism as an ideology that spreads out and affects the world, neoliberalism-in-general regards neoliberalism in more comparative terms, advocating for theorising about neoliberalism from an actually existing, grounded perspective. Through the delineation of the actual existing neoliberalism of the Anglophone world, Peck and Tickell (2002) reified the process of neoliberalisation by situating it in the restructuring of regulation and institutions under

the Clinton Administration and the Blair Administration. Peck and Tickell (2002)

argue that neoliberalism in its earlier form tended to

*‘exacerbate and deepen the macroeconomic cycle, to license short-termist, plundering strategies on the part of competing capitals, to widen social, economic, and spatial inequalities, to undermine the production of public goods and collective services, to degrade social and environmental resources, to constrain and weaken socially progressive alternatives to (or even conservative ameliorations of) market liberalism, and so forth’ (Peck and Tickell, 2002, p. 386).*

In response to the economic crisis in the 1990s for which many hold neoliberalism responsible, both the Clinton and the Blair Administration initiated active state-building and regulatory reform so as to roll-out new measures of technocratieconomic management and new tactics for a more interventionist social policy, reforming institutional hardwares. These manoeuvres were carefully calculated, fashioned, and de-politicalised as fixes to the frailty of Thatcher/Reagan neoliberalism, and further consolidated the neoliberal ideology. The ‘roll-out’ neoliberalism draws more on mobilising local communities, promoting partnership-based arrangements between local governments and local communities in order to substitute undelivered social welfare (Peck and Tickell, 1994, Peck and Tickell, 2002, Brenner and Theodore, 2002b, Jessop, 2007). In reaction to the previous period of labour market infirmity, the new form of soft neoliberalism also reconstituted a failing labour market, mobilising the poor for low-wages, and precarious employment (Peck, 2001, Peck and Tickell, 2002). While neoliberalism-in-theory approaches

neoliberalism in a conceptual way, seeing it as an abstract ideology, and neoliberalism-in-general emphasises on the regulatory change in the specific regimes in particular spaces and times, the third approach focuses on the governing techniques of neoliberalism.

In neoliberalism as governmentality, neoliberalism is reckoned to be the governing techniques employed to govern society through the market. By implementing economic logic within politics, society, culture, and individual behaviour, people's choices are designed and shaped to conform with the market rules (Rose, 1996, Rose, 1999). This third account shifts attention from the government of a particular authority or regime to the everyday practices guided by economic reasons, the local assemblage generated by the new technologies of power (Larner et al., 2007, see Weller and O'Neill, 2014). In other words, since neoliberalism travels and is selectively taken up in different political contexts, it can be better understood via examining the constellation of local assemblage. By adopting an ethnographic perspective, Ong (2006) characterises neoliberalism in East and Southeast Asia as 'exception', wherein neoliberalism '*articulates sovereign rule and the regime of citizenship*' (p. 6). Since neoliberalism in these areas is a newly introduced measure of management, instead of the general characteristic of technologies of governing, these market-driven calculations thus interplay with different circumstances such as authoritarianism, colonialism, and issues of ethics, religion, and citizenship. Therefore, she argues the: '*neoliberal logic is best conceptualized not as a standardized universal apparatus, but a migratory technology of governing that interacts with situated sets of elements and circumstances*' (Ong, 2007, p. 5). That is to say,

neoliberalism in Ong's opinion is better captured through the low-flying description that concerns the entanglement between economic logic and actual local conditions such as authoritarianism, colonialism, and migration. However, such heterogeneous views of neoliberalism raise another critical question. That is, if neoliberalism can be imagined as variegated, heterogeneous, or changeable as it interacts with all kinds of political or social entities, what exactly, then, makes these shifts neoliberal?

In response to the previous question, Clarke (2008) argues that the point is not to identify neoliberalism as a tidal wave that travels from one place to another. Rather than trying to identify the assumed neoliberal essence that represents the same things everywhere, one should ask a more important question: *'Do they form the dominant or organizing principle for the places and sites where they appear?'* (Clarke, 2008, p. 138). As with the similar argument Ong (2006) makes, neoliberalism should be examined in terms of how it *'is reconfiguring relationships between governing and the governed, power and knowledge, and sovereignty and territoriality'* (p.3). Clarke (2008) further criticises the current understanding of neoliberalism as promiscuous, omnipresent, and omnipotent. The promiscuity between different takes on neoliberalism is due to different uses/interpretations of the term. Political economists thus tend to stress the material structure of certain relations and interests within neoliberalism, whilst Foucauldians pay more attention to its discursively constituted practices and organisational forms. According to Clarke, the omnipresence of neoliberalism refers to the tendency to depict it in all-encompassing terms, or as an umbrella concept that includes many different political and economical meanings. The omnipotent depiction of neoliberalism refers to the ways it is seen to be



responsible for almost all affairs, as Clarke lists in his paper:

*'states, spaces, logics, techniques, technologies, discourses, discursive framework, ideologies, ways of thinking, projects, agendas, programs, governmentality, measures, regimes, development, ethno-development, development imaginaries, global forms of control, social policies, multiculturalism, audit cultures, managerialism, restructuring, re- form, privatization, regulatory frameworks, governance, good governance, NGOs, third sector, subjects, subjectivities, individualization, professionalization, normalization, market logics, market forms of calculation, the destatalization of government and the degovernmentalization of the state' (p. 138).*

This tendency to blame neoliberalism for everything not only neglects the force of other entities during the process, but also treats neoliberalism as a pre-existing thing, ignoring the contradictions and the antagonisms that exist within it. Clarke (2008) then further argues in favour of viewing neoliberalism as a political and governmental repertoire employed to resolve the contradictions and antagonisms of the political project in social fields. This repertoire may involve a series of practices, discourses, and other governing technologies that are considered non-political. While this repertoire includes many new strategies invented to solve the contradictions and failures in social fields, it at the same time generates new problems for a society. As in Ong (2006)'s words: *'Neoliberalism can also be conceptualized as a new relationship between government and knowledge through which governing activities are re-cast as nonpolitical and nonideological problems that need technical solutions'* (p. 3). Therefore, Clarke (2008) proposes re-imagining neoliberalism in terms of two

articulations: the assembling of the entities involved in the neoliberal repertoire, and the coding of words, symbols, practices, and policies. In that case, assemblage thinking may offer a lot to the processes involved in re-thinking neoliberalism and the re-forming of neoliberal space, especially with respect to the constellation of neoliberal cities.

### *3.1.2. Neoliberal Urbanism and Urban Assemblage*

In Li's (2007) work on community forest management in Indonesia, where she examined the process of neoliberal policy being transferred as the assemblage of discourses, knowledge, agents like experts, activists, and government officials. To her, the traveling of neoliberal policy is itself a complicated assembling process, made up of many discrete participants, which should all be reckoned with for their influence in the conduct of neoliberal forestry. In the book *Mobile Urbanism* (McCann and Ward, 2011), assemblage thinking is employed by urban geographers to re-think the territorialising of the city through attending to the mobile policies, political struggles, and the relational connections of the cities. Since mobile policies were motivated by local interests, mediated through local actors and encountered local contingencies that were very much grounded and territorialised in the local historical-geographical circumstances, the assemblage theory therefore provides a more inclusive way to think about the mobile policies. This assemblage thinking that emphasises the importance of theorising upon each urban assemblage from the ground up, appears more suitable to the previous discussion of neoliberal urbanism that considers the pre-assumed neoliberalism to be the 'usual suspect' of current urban transformation

(Theodore et al., 2011, Peck et al., 2009). Instead of focusing on identifying the character of neoliberalism, e.g. tending to seek technical solutions, to be de-contextualised, and to travel through the global network, assemblage thinking considers mobile urban policy more as being passed by actors between cities, and being adopted or contested through the actual practices necessary for the policy to be carried out. As Tsing (2000) has put it: *‘A focus on circulation shows us the movement of people, things, ideas, or institutions, but it does not show us how this movement depends on defining tracks and grounds or scales and units of agency. [...] If we imagined creeks, perhaps the model would be different; we might notice the channel as well as the water moving’* (p. 337, see also Robinson, 2011b). In other words, the point is not to delineate how neoliberalism sprawls from the UK and the US to other places, affecting the urban governance of cities, but to reflect more closely on how the mobility and the flow are being produced at the same time as producing the urban actors.

As in the case of the drug policy learning of Vancouver, McCann (2008, 2011) demonstrates how urban actors such as politicians, activists, drug users, documentary filmmakers defined truth, and how participants of different forms mobilised urban policy, whilst leaving some parts of that policy immobilised. By employing assemblage thinking into the urban policy transfer, the process thus can be seen in terms of the mundane practices and the interaction between actors; how they co-orchestrate the urban policy transfer, and transform alongside the process, re-figuring the coming together of urban policy ‘without neoliberalism’ (Clarke, 2008).

In this sense, the current issues of neoliberal urbanism such as urban competition

(Harvey, 1989, Hall and Hubbard, 1996, Jessop and Sum, 2000, Kipfer and Keil, 2002, MacLeod, 2002), communitarianism (Brenner and Theodore, 2002b, Wallace, 2010, Savini, 2011), urban regeneration (MacLeod, 2002, Swyngedouw et al., 2002, Weber, 2002), or urban sustainable fix (While et al., 2004), should be discussed in terms of the mobilising and the participating of urban actors. In Taipei's case, the encounter of water-oriented urban planning and urban informality should thus be illuminated via examining the process of the water knowledge learning, the urban policy transferring, the community participation mobilising, the urban development deliberating, and the being of informal dwellings, which have been existing in the city for decades. This brings us to the next two points of urban discussion: *How should assemblage thinking be applied to the discussion of urban water? And how can assemblage thinking contribute to the understanding of urban informality?*

### **3.2. Mapping the Hydro-City**

If modernisation holds the key to understanding the becoming of cities as they are today, the taming of water then is the key feature of this urban modernisation. Water has been at the centre of urban geography for a long time. From the modernisation project of constructing urban sewers, to the privatisation of urban water systems (Gandy, 1999, Graham and Marvin, 2001, Harvey, 2003, Bakker, 2004, Kaika, 2005), water has always been reckoned as being a pivotal urban object that sustains urban lives and maintains urban sanitation. In this sense, the interweaving of water and the city can thus be understood as the assembling process of urban water. Assemblage thinking can contribute to the discussion of urban water in three ways. First, thinking

of water as a crucial entity in the urban assemblage. That way, the process of urbanisation can be understood as territorialisation with the participation of water, instead of focusing only on political and economic factors. Second, thinking of water in terms of how it was coded by the urban assemblage. Along with the assembling process of the city, the functions, the meanings, and roles of water transform accordingly. This focus thus offers a way to see how the change in the urbanisation process is reflected in urban water. And finally, besides being the constituent urban metabolism and the result of urbanisation, water can also be discussed as the assemblage of perception. So that our recognition toward water can also be understood as an assembling process through which knowledge from different directions intertwines.

### *3.2.1. Assembling Hydro-Urbanisation*

Urban water has been participating in the shaping of the urban landscape for a long time. In fact, given the massive consumption of water in the densely populated city, water has always been a central issue in the construction of modern cities. In Gandy's *Concrete and Clay* (2003), he follows the Marxist tradition, examining urban water in New York City in terms of its production process. He argues:

*'The production of urban nature not only involves the transformation of capital but simultaneously intersects with the changing role of the state, merging metropolitan culture of nature, and wider shifts in the social and political complexion of the city life. The complex cultural hybridities that characterise the development and experience of urban nature have a material basis not only in*

*the city itself but also in the process of social and economic transformation that have enabled New York City to gain its ascendancy as a global city' (p. 5)*

This approach discerns the significance of capital flow to other urban flows like the material, and cultural transformation along with the urbanisation of water. Gandy further develops the concept of 'cyborg urbanisation', imagining the city as a hybrid of machine and organism, and urban infrastructures as a vast life support system. As he puts it:

*'The cyborg metaphor reveals the interaction between social and biophysical process that produce urban space and sustain the possibilities for everyday life in the modern city. [...] this hybrid perspective illuminates the tension between the city as an abstract arena for capital and as a lived space for human interaction and cultural meaning' (p. 9).*

For example, the large-scale water system of New York City, Croton Aqueduct, was built under the demand from not only the fast growing population and economy, but also from the large requirement for water for putting out urban fires in the 19<sup>th</sup> century. Being the technological wonder of the era, the water supply system soon facilitated urban economic growth, generating the rapid development of the city. However, since the fiscal crisis in 1975, the once much public funded water system was increasingly controlled by private capital. This trend was further extended by the threats of E. coli and the wake of ecological modernisation. Gandy's illustrating of New York City's historical progression of urban infrastructures demonstrates how urban water was produced in the process of capital accumulation, and at the same time transforms the urban landscape.

Drawing more on the privatising process, Graham and Marvin in *Splintering Urbanism* (2001) delineate the shift in administration of urban infrastructures from a form of natural monopoly, in which the state plays the role of the sole provider of public services (e.g. water, electricity), to a more splintered form, in which these services were instead provided by private enterprises, since they can manage these infrastructures with more efficiency, and better fit the fiscal crisis of the state. This book not only illustrates how the water was transformed from the public service provided by the state into the assets of private enterprises; more importantly, it provided a detailed description on the role of water in the making of the capitalist city. Assemblage thinking therefore can be used for the comprehension of urban water, and for re-thinking the socio-natural process making up the urban assemblage.

### 3.2.2. *Water in the Urban Assemblage*

With inspiration from post-structuralism, within assemblage thinking water moves from being defined by its human production, to being re-imagined as a capable, forceful ‘quasi-object’. In Latour (1993)’s pivotal work *We Have Never Been Modern*, he argues that dualistic thinking about things has led to a great division between nature and society. As he has puts it:

*‘We do not need to attach our explanations to the two pure forms known as the Object or Subject/Society, because these are, on the contrary, partial and purified results of the central practice that is our sole concern. The explanations we seek will indeed obtain Nature and Society, but only as a final outcome, not as a beginning. Nature does revolve, but not around the Subject/Society. It*

*revolves around the collective that produces things and people. The Subject does revolve, but not around Nature. It revolves around the collective out of which people and things are generated. At last the Middle Kingdom is represented. Natures and societies are its satellites' (p.79).*

If we imagine things as quasi-objects rather than seeing them as merely the abstractions of human production, we can thus know things for their autonomous potentiality, not via reducing them to something else. Inspired by Latour (1993)'s notion of 'quasi-object', Kaika and Swyngedouw (2000) adopt a rhizomic perspective on water, thinking of it as relating to the bio-chemical processes of the human body; urban sanitation, canalisation, and the power struggle between gender, ethnic, and class groups. (Swyngedouw, 2006b) further adopts metabolism as the metaphor for understanding the hydro-social cycle and the space:

*'The concept of "metabolism" arose in the early nineteen century, particularly in relationship to the material exchanges in the body with respect to respiration. It became extended later to include material exchanges between organisms and the environment as well as the bio-physical processes within living entities' (p. 23).*

By thinking of the hydrological cycle as metabolism in the human body, the vibrant interchange between different things that happen in particular places could thus be captured:

*'[...] I mean that the "world" is a process of perpetual metabolism in which social and natural processes combine in a historical-geographical production process of socionature, whose outcome (historical nature) embodies chemical,*



*physical, social, economic, political, and cultural processes in highly contradictory but inseparable manners. Every body and thing is a mediator, part social, part natural (but without discrete boundaries), which internalizes the multiple contradictory relations that redefine and rework every body and thing'. (Swyngedouw, 1996, p. 447)*

By using water as the entry point for enquiry into urban metabolism, the political-ecological process of public infrastructures, water distribution, and urban sanitation can thus be scrutinised. Refusing to see water as merely a natural object, Swyngedouw (2004) employed the rhizomic view on water, seeing water as layered with its own materialities and its relations with other things. To further illuminate the power entanglements of which water is an active part, Swyngedouw employs the case of Spain's hydrological modernisation to explain how water engineering played the leading role in Spain's revival since it lost its colonial possessions. In order to remake the nation, hydrological engineering was adopted as a national project to overcome the escalating domestic contradictions, and became the scientific solution to the natural obstacles that prevented Spain from further development (Swyngedouw, 1999, Swyngedouw, 2007, Swyngedouw, 2009, Swyngedouw, 2013). By thinking of the city as an assemblage, not only can the variety of urban-water relations be captured through description of the urban-natural process, but also a new scope on urban inequality was initiated through situating this hydro-social transformation in the discussion of class, gender, ethics, and the other kinds of power struggle.

Kaika (2005) examines the city as a hybrid form, analysing metabolised urban nature by seeing it as a constantly contested process of contradictions and conflicts. In her

book *City of Flows* (2005), she amplifies how the modern waterworks in European cities are fetishised as the symbol of Western urban progression: the power display of human technology over nature. Through this modern Promethean project, water was transformed into a human artefact that leads people to a cleaner, safer modern world. Through the unfolding of water technologies, the tamed water was again incorporated into the capital expansion, reinforcing the old divisions of gender, class, and nationality, at the same time being re-defined as domestic, modern, and precious. This is not the only form of integration between water and capitalism.

Bakker, in her work *An Uncooperative Commodity* Bakker (2004), employs the trajectory of water paradigms in England and Wales to elaborate how the character of water led to state failure in water governance. Along with ecological modernisation, the governance of water can no longer be conceived as a conundrum whereby we are forced to choose between either the social equity of water accessibility, and the principle of economic equity of benefit. Instead, the state failure hypothesis rose during the fiscal stagnation of the 1970s and 80s and was accompanied by market environmentalism, which suggests that water can be used with greater efficiency at the same time as being more environmentally friendly. In this sense, environmentalism actually featured as a new character in the old economic-society equation of English and Welsh water governance, leading to privatisation as a measure of re-regulation. However, this is not to say that the privatisation of water governance functions solely via market mechanisms. Instead, with water revealing its potentiality during the Yorkshire drought taking place in 1995, the private ownership of water was again challenged by the return of public or mutual ownership of water as

a form of re-regulation. This makes water governance in England and Wales nowadays very vertically integrated, as a unique form that is neither public nor private, but both public and private. This case of England and Wales though is not an urban-based case, it can still capture how water is not only transformed by neoliberalising, but, through its own potentialities, transforms actually existing neoliberalism.

From the point of view of disaster management, water in the form of a flood was also investigated repeatedly for the sake of urban security. In the case of urban flood risk management, water was re-learned through the increasing damage it causes in escalating flood events; as a threat to the city that has to be managed through the adjustment of urban land use (Wolsink, 2006, Woltjer and Al, 2007); structural governance changes in urban flood management (Birkmann et al., 2010); and a more engaging knowledge producing process that involves collaboration between the associated departments and the public (Lane et al., 2011).

By adopting assemblage thinking in urban water, the urbanisation of water can be imagined as full of contingency. Through delineating the crisis of nationalism and droughts in Greece (Kaika, 2005), not only can we see the modernisation and neoliberalisation of the city as the first articulation of the urban assemblage, but also get to perceive the domestication and the commodification of water as the second articulation—the coding process of water in the urban assemblage—and hence re-learn the trajectory of water through urbanisation.

### *3.2.3. Learning Urban Water*

Having said that, the urbanisation of water is not always the same story. The

perception of water can be produced through the city's own urbanisation experiences, or be learned about through the relationship between international organisations and cities. Assemblage thinking under the circumstances can be used as a way to re-figure the forming of our knowledge about water, provincialising different ideas of water so they can be comprehended in terms of their own circumstances. Water hence can be situated in its knowledge production process, and be known for the way it became certain versions of water knowledge.

In Bakker's latter works, she brought inquiry into public/private duality in water governance back to the urban scale, examining the World Bank's construction of public water as a form of biopolitics which aims for secure public health and the economic growth of developing countries. By adopting Foucault's concept of biopolitics, she argue:

*'modern governments seek to optimize both water resources and our individual water use practices in order to secure the health and productivity of the population. This control is enacted through formal regulation but also self-policed through the cultural aesthetics of health and hygiene, from water bodies to individual human bodies' (Bakker, 2013a, p. 282).*

To her, the modernisation of urban water during the 1950s to 1980s is a material expression of the extending power of the World Bank over developing countries. However, what is distinct about this case is the post-colonial unequal governance frameworks that make water supply unable to be carried out evenly without the mediation of nongovernmental parties of NGOs, small business, and local communities that operate on a smaller scale (Bakker, 2013a). To her, these

alternatives to market rule do not state the retrenchment of neoliberalism, and instead should be understood as the refinement of neoliberal practices (Bakker, 2013b).

The knowledge transfer of water can be further captured in the case of Guayaquil and Mumbai. In the case of Guayaquil, Ecuador, Swyngedouw (2004) demonstrates how the urbanisation of water is framed by the World Bank and the IMF as a technological issue, as a natural resource with scarcity that must be distributed efficiently. With the mediation of the private company, it was eventually turning water in to an export product, disregarding its accessibility to local people.

(Loftus, 2007, Loftus and Lumsden, 2008, Loftus, 2009b) takes Gramsci's stance, seeing social-nature as mutually constitutive, and employing the concept of hegemony to rethink the urbanisation processing of water. With the case of the urbanisation of water in South Africa, he illustrates how the urban elites have constructed a particular idea of urban water, attaching this 'common worldview' of urban water to their moral and cultural leadership, and ended up transforming people's relation with water.

Besides the knowledge transfer with neoliberalising purposes, the ideas of water were mobilised for other reasons. As in Linton (2010)'s *What is Water*, he seeks to find the ideological roots of water as H<sub>2</sub>O in the hydrological cycle. By revisiting the social production of water in particular historical circumstances such as the Cold War, the author explains how water was stripped from its social, environmental context and was formed into an abstract idea, and how this idea ended up shaping the current relation of water with others, trapping people's attention on the quantity of water while disregarding other related issues.

Assemblage thinking in this sense offers a wide framework for thinking about what

water is, and how it takes part in the making of the city. By seeing urban constituents and power relations in a decentralised way, the delicate co-evolving process of humans, materials, historical events, discourses and ideology thus can be taken into consideration in our perceiving of urban water, while keeping a more critical eye on the issues e.g. unequal accessibility to urban water, or the fairness of flood risk management (Johnson et al., 2007).

### **3.3. Assembling the Informal Urban Condition**

The assemblage thinking in this chapter thus far has been employed to position neoliberal ideological flow and urban water in a context whereby both participate in the making of the city. In this section, assemblage thinking is used to address human issues; and specifically the dwelling of humans in an urban habitat. With the comparative turn of urban studies as discussed in the last chapter, the idea of a city nowadays is no longer based solely on the popular vision of Western urbanisation. Rather, the various paths of urbanisation in cities of the global offer new contexts to think about urbanisation, enabling a more heterogeneous understanding of the city to emerge (Roy, 2009a).

The concept of urban informality is used in a wide range of urban studies in the Global South. Since urban development in Southern cities was led by the cities' own historical circumstances such as colonialism and authoritarianism, their paths of development do not coincide with the urbanisation experiences of the Global North, and can thus not be fully comprehended through the urban theory produced there. Thinking of cities as Southern cities enables us to imagine cities in various forms, to

engage with more issues, e.g. foreign intervention, policy transferring, and democratisation, in the discussion of urbanisation. Therefore, these urban “misfits” should be understood through their own modes of urbanisation (McFarlane, 2008). They provide different paths for the understanding of human-environment relations in the city, enabling the urban imagination of plural forms. In the case of Taipei’s urban water governance, the governing authority decided to re-plan urban land use according a new level of flood threat. This decision was based on the newly-learned flood management knowledge mediated by the Dutch experience of integrative water management. However, this new planning ethos cannot be carried out without negotiating its way into the flexible, ambiguous land use regulation of the city, and the city’s existing human-environment relations. In these contexts, the concept of urban informality is particularly important in shedding light on Taipei’s existing urban dwelling relation, and in offering a different perspective on the urban-water relation. By thinking Taipei as a Global South city, we thus can avoid overgeneralising its urbanisation process by jumping too fast to the employment of urban theories based on the experiences of Anglophone cities. That way, we can create a more tolerant conceptualising process that can take a variety of issues into the discussion of urbanisation. Assemblage theory, in this sense, provides a theoretical framework to examine the heterogeneous urban entities in Taipei’s urbanisation process. Before proceeding to the elaboration of how assemblage can contribute to the understanding of urban informality and the current urban condition, I am going to begin by addressing the current discussions of informality, and how it was used in different ways.

### 3.3.1. *Informality and Urban Living*

The concept of urban informality has been widely adopted in discussions of informal urban settlements (Hall and Pfeiffer, 2000) and street vendors (De Soto, 2000). In McFarlane and Waibel (2012)'s *Urban Informalities*, urban informality is approached in four different ways: a spatial categorisation, an organisational form, a governmental tool, and a negotiable value. First, as a spatial categorisation, informality is often conceived as the landscape of urban poverty, which appears in the form of slums in metro cores or urban peripheries, with or without the state authorisation (Hansen and Vaa, 2004, Roy and AlSayyad, 2004, Davies, 2006). Employing John Turner (1968)'s famous notion of 'housing is a verb', Davies (2006) argues '*The urban poor have to solve a complex equation as they try to optimize housing cost, tenure security, quality of shelter, journey to work, and sometimes, personal safety*' (p. 27). Therefore, the urban poor may have to negotiate the need for rent free space, with secure tenure, accessibility to market and public infrastructures such as train systems, and even with the cost of pollution or long commute hours (Soliman and Soto, 2004, see Davies, 2006). Another spatial form of informality is the illegal or extra-illegal economic activities such as street vendors, informal employment between people, and the home-based enterprises that struggle for their daily survival, without the availability of loans and channels for imports (Hansen and Vaa, 2004, Maloney, 2004).

The second approach to urban informality is to see it as an organisational form. As



McFarlane and Waibel (2012) have elaborated: *‘Formal is generally assumed to be rule-based, structured, explicit, predictable, and regular, while informal is generally assumed to be defined by the absence of these forms. Informality is often thought as spontaneous, tacit, and affective. (p. 3)’* In this sense, informality is thought as the unorthodox, unplannable parts of urban development, opposed to the carefully-designed, science-based, and predictable urban policy introduced from the West. For instance, with the insight from Agamben’s work, Hoffman (2007) illustrates how barracks were deployed by sovereignty as a flexible way to respond to the demand for labour within a short period of time (see McFarlane and Waibel, 2012). Though these labour forces were not formally incorporated into the labour markets, they can still be called upon to meet the sudden demand of low-wage labour from the formal part of the economy. Since such organisational form can be easily adjusted by those wielding municipal power, urban informality in some cases can also be understood as a governmental tool for state intervention on informal settlements and labour. As in Roy (2009b)’s words: *‘Informality then is not a set of unregulated activities that lies beyond the reach of planning; rather it is planning that inscribes the informal by designating some activities as authorized and others as un-authorized, by demolishing slums while granting legal status to equally illegal suburban developments. (P. 10)’* By strategically deploying differentiated juridical interventions, states can thus deploy the formal-informal distinction just to sustain the power or interest of urban authorities. As demonstrated by Soliman (2010), informality with the facilitation from state or planning professionals should be able to be incorporated into formal housing development. By engaging different stakeholders, e.g. the residents, NGOs, experts,

and politicians, the technical enablement of informal settlements can be redeemed as part of the urban plan that provides the cheaper housing option, and as a way to alleviate urban poverty.

The final way is to approach urban informality by viewing it as a negotiable value. As argued by Roy and AlSayyad (2004): *'If formality operates through the fixing of value, including the mapping of spatial value, then informality operates through the constant negotiability of value'* (p. 5). That is to say, it was through the constant negotiation of value that the state of deregulation was thus able to sustain itself (McFarlane and Waibel, 2012). In other words, urban informality could be understood as local knowledge; the norms of people's everyday sociality used to support their daily activities (Bayat, 1997), an idiom of urbanisation as people negotiate with the regulations, institutions, and the practices of state power (Roy, 2009c). Thinking of informality as a negotiable value could lead to a more heterogeneous imagination of urban sovereignty, such as the urban municipal power, NGOs, and foreign intervention etc. (Alsayyad and Roy, 2006), and urbanisation can be deemed as a ceaseless re-figuration between people and the urban sovereigns. In this sense, urban informality provides urban studies with a perspective from everyday, subaltern life, which reveals the negotiation between legal/illegal and formal/informal which shapes contemporary urban lives. For example, in Holston (2008)'s study of São Paulo, the dwellers of urban peripheries have negotiated their way to formalisation through the years through the 'right to the city' movement. This formalisation of the peripheries even shapes a new identity of the dweller, as an expression of citizen power that is capable of participating in the urban planning process. However, it was also

acknowledged by Holston that this 'right' to the city was marked by the private ownership of informal properties. In other words, though the peripheries are legally claimed by the older generation of squatters, the new comers' entitlements to the peripheries remain denied not only by the state, but also by the earlier settlers. Urban informality, in this sense, offers us a crack through which to see the interplay between people, regulations, local tacit knowledge and relations that cannot be reflected via the formal categorisation of space, and enables a richer imagination toward urbanisation. Given the multiple issues involved in urban informality, assemblage theory in this context can be adopted as the way to redeem the dwelling relations of urban space: the way people accommodate themselves to the physical environment of particular urban spaces, gain their local knowledge for surviving, negotiating with local politicians and institutions.

### *3.3.2. Assembling Urban Lives*

Urban informality not only provides a more comprehensive framework to discuss the interaction between people, institutions, and regulations of urban space, it also offers an opportunity to re-think all the things that interweave within the urban fabric of the physical environment, such as historical contingencies, religions, ethnicities, and economic activities. Assemblage thinking therefore is a way to think about how people, urban tacit knowledge, and public policy interact in people's daily lives. For instance, Dovey (2011) employed urban informality as the example to demonstrate how assemblage thinking offers an anti-dichotomised view on things.

In his words:

*‘Informal settlements can clearly be linked to transnational economic and geopolitical forces, yet urban informality, unlike slums and poverty, is neither necessarily a problem nor an effect of capitalism — all cities embody a mix of informality/formality and urbanity requires informality. The informal/formal connection resonates with a series of conceptual twofold concepts that are key to assemblage thinking: rhizome/tree, smooth/striated, network/ hierarchy, minor/major, molecular/molar, difference/identity and becoming/being’ (p. 351).*

While political economy does offer a ‘ground’ for the analysis of urban root causes, assemblage theory on the other hand seeks to offer a more extensive way to find the connections between these urban root causes. This argument is a response to Brenner et al. (2011)’s accusation toward assemblage theory as ‘naïve objectivism’, which criticises assemblage as a groundless analysis. To Dovey (2012), it is not the root causes that the urban assemblage theorists are after. Instead, it is the ability to bring different considerations together that is offered by assemblage theory, which can contribute to the understanding of urban change, especially in relation to complex issues like urban informality.

For instance, by employing assemblage in the discussion of urban informality, informality would no longer be discussed only in terms of the legal condition of the buildings or the economical situation of the squatters. Rather, different scopes like the physical environment or the materiality of the informality can also be distinguished.

In Dovey and King (2011)’s investigation on the morphology of urban informal settlements from across the world, they further demonstrate how assemblage

contributes to the understanding of urban informality:

*'Deleuzian thinking (with that of Guattari) deploys a range of twofold concepts that resonate with the informal/formal distinction that is a precept for this paper (Deleuze and Guattari, 1987). One of these twofold conceptions is the rhizome/tree, which contrasts the horizontal network connectivity of a rhizomic structure with tree-like systems organized hierarchically into stem and branches. Informal urbanism is rhizomic in that it migrates horizontally and emerges within the interstices of hierarchic order' (p. 27).*

By categorising informal buildings according to their experiences in the field, literatures, photographs and maps, Dovey and King (2011) developed a typology of informal settlements (see Figure 3-1). This morphology of urban informality is the conceptualisation of the relation between informal constructions and other urban components, or to put it simply, how informal settlements grow:

*'The first is simply settling, as on unclaimed and often unbounded land as indigenous villages and towns have come about over millennia. Second is inserting, into the uninhabited, abandoned or leftover fragments of urban space. Third is attaching, as informal accretions or excrescences grow out of, or attach onto, the structures of the formal city. These processes of settling, inserting and attaching occur in a diversity of urban situations – unused land, urban infrastructure, edges to formal settlement, rustbelt districts. The outcome is the seemingly limitless conditions of informal settlement to be confronted in cities' (Dovey and King, 2011, p. 13).*

For example, the informal houses can be found in the back of formal private buildings,

along the railway, or at the waterfronts. These topological relations between informal settlements embody the various ways of living in the informal settlements. Building the informal houses adjacent to the formal private houses indicates the squatters' need for minimising their exposure to the governing forces; living along the railway may suggest the squatters' need for commuting to work; residing in the waterfronts denotes the danger that squatters court since their home may be struck by the floods. This demarcation of this urban morphology is a heuristic tool for thinking about the ways these informal settlements grew through the ceaseless negotiation with formal settlements, traffic infrastructures, and floods; the way the legality of the settlements is earned via trading, relentless dwelling, and persuading, the way their persistence was sustained by their invisibility to the public eye; and the way they were handled by the governing authorities.

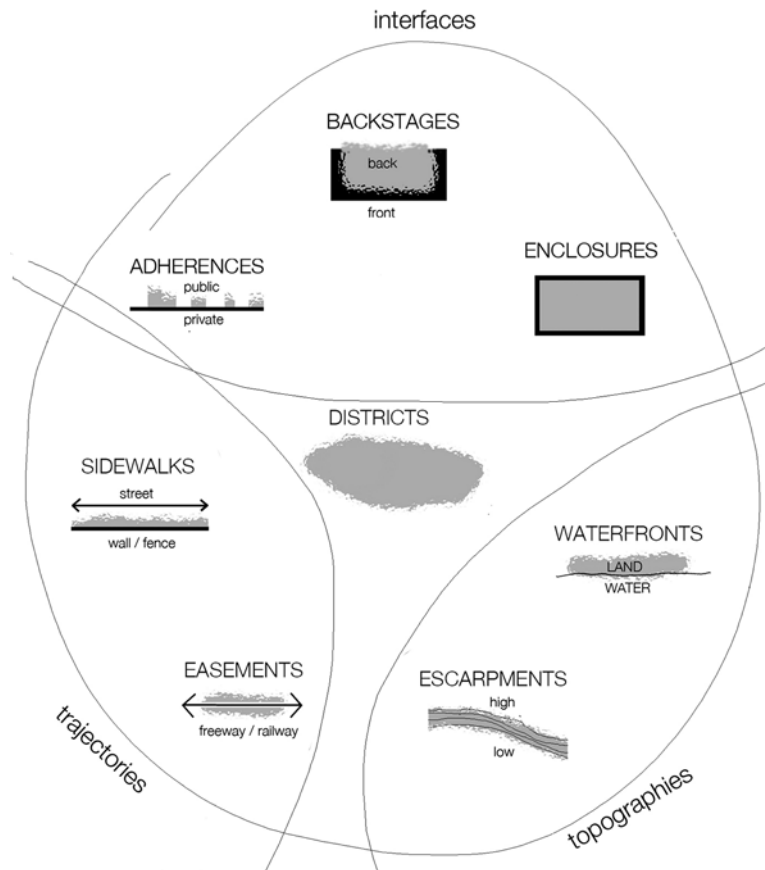


Figure 3-1 The typology of informal settlements.

Source: Dovey and King 2011

Assemblage thinking not only provides some insights of the formation of informal settlements, but also it illuminates how people, space, and things are meshing into contemporary urban rhythms. In the case of Singapore's Lembu Square in Little India, the state-owned parkland is occupied by Bangladeshi vendors; foods, and people are intertwining into this ethnic enclave, a third space (Soja, 1996), in which different urban experiences mesh together. In this Bangladeshi *Minimart*, the small businesses with only the simplest public infrastructures like benches, waste receptacles, payphones, and CCTV systems manage to provide fruits, vegetables, rice, halal meats, fish, Bangladeshi cigarettes, books, and DVDs to Bangladeshi tourists and migrant workers. The *Minimart* not only incubates business opportunities for small

establishments, but it also furnishes a homely place for the Bangladeshi workers to get together with friends and family after a long day of work, finding their sense of belonging in this global-city state (Su-Jan et al., 2012). In Yeo and Heng (2014)'s case of Toa Payoh (a.k.a. TP Central) in Singapore, they further demonstrate how public space in a state-managed township lays out an environment with low physical and economic entry barriers, inviting people from different ethnicities, wearing different types of clothing, and speaking different languages, to shop and to linger around. The Toa Payoh demonstrates the ways of life that are not yet entirely spoiled by the globalisation force of the consumerist and privatised urban landscape. As they put it:

*'[...] public benches function as temporary beds; kerbs serve as places to rest; and open spaces transform into an imaginative playground for young children. Moreover, there also appears to be tolerance of practices that deviate from local ordinances that regulate the use of space. Bicycling, for example, is prohibited along the shopping street; nevertheless, bicyclists continue to contravene this bylaw while pedestrians have learnt to negotiate the promenade with other users. Similarly, receptacles for refuse are dispersed throughout TP Central for the disposal of garbage, which accumulates faster than it is cleared. What may be considered a visual blight on the urban landscape is, instead, seen as a recycling ground for opportunistic karang guni (rags and scraps) collectors whom residents and shopkeepers tolerate as members of the community' (p. 722).*

This fuzzy urban public realm exhibits a drastically different urban form from the methodical Haussmannien, fostering the nostalgic milieu of the 'Old Singapore',



where things remain how they used to be before the city-state became the ‘globalised city’. Though not being specified, the delineating of urban informality in these two cases actually involves the assembling of commercial goods, entrepreneurship, different ethnic/national identities, and different imaginations geared towards the use of one particular space. It is this assemblage of the entwining of urban parts that makes urban informality so compelling as a way to approach subaltern urbanism (Guha, 1988). Assemblage thinking thus provides a context within which it becomes possible to flexibly illustrate the subaltern people, their subaltern space, and their daily encounters as urbanisation proceeds (see also Roy, 2011). Through this down-to-earth, unassuming scope assemblage thinking not only enables us to nourish our understanding of urban informality, it but also contributes in capturing the vigorous urban lives that cannot be quite comprehended by the urban theories that originated from the Anglophone cities.

### **3.4. Conclusion**

This chapter has elaborated on what assemblage thinking has to offer contemporary urban studies. In the discussion of neoliberal urbanism, assemblage theory sheds light on how neoliberalism is mobilised, how it was learned, mediated, and transferred from one city to another, taking neoliberalism from the abstract idea down to the process of its making. Neoliberalism therefore can no longer be considered a doctrine that originated in its Anglophone heartland, traveling across the world with a few modifications. Rather, it is the process of how this neoliberal policy was translated, how it intertwined with institutions, regulations, physical environments, economies,

and political circumstances that makes it so powerful and influential. Assemblage thinking here offers a way to think of neoliberal urbanism in terms of its territorialising process, of its interaction with all urban entities.

The second part of this chapter addresses how assemblage thinking offers a framework for thinking about the negotiation between water, urban infrastructures, and urbanisation. I argue from an assemblage point of view that it can be understood more effectively how water is incorporated into the making of the modern city through human effort; and water can also be examined in relation to how it participates in the making of a city, its co-producing of urbanism, and its role in sustaining urban assemblages. Finally, it can also be examined in terms of how it was conceptualised, and learned in the global circuits of knowledge production.

The final part of this chapter focuses on assemblage and urban informality. Through the employment of assemblage theory, urban informality was no longer seen as merely the mingling of legality, sovereign power, human dwellings, and the physical environment. By delineating the interaction process between the squatter, the physical environment, the tactical urban knowledge, and the urban institutions, informality can instead be imagined as the lens for seeing the vibrant, diverse, and changing urban vernacular lives, which were beyond the comprehension of traditional approaches to the city.

By taking neoliberalism, urban water, and urban informality as the component parts of the urban assemblage, urban regions could thus be understood in a heterogeneous form, as the co-evolving of capital circulation, forms of government, human-nature relations, and cultural characters. In the light of these literatures, this project aims to

amplify how neoliberal urbanism, the modernisation of urban water, and urban informality coexist in the contemporary urban landscape of the Taipei area.

## **4. Relational Space and Urban Justice**

### **4.1. Introduction**

In the previous chapters, I have repeatedly emphasised how assemblage thinking contributes to the understanding of the contemporary urban conditions. This chapter aims to situate the forms of assemblage thinking this project employs in the recent urban ontological debate. This chapter begins with a discussion of the reconciliation of relational space and Marxist critical urban study, how it contributes to this project, and the progress of urban studies more generally. In doing so, I am going to address how exactly assemblage can contribute to the relational thinking of urban space, at the same time bringing new light to critical urbanism. I will argue that the procedural approach that assemblage thinking adopts emphasises the forces of things themselves, the territorialisation process of urban entities in urban space. This grants urban study a more grounded perspective, seeing things as they come together without jumping immediately to their possible causality. Furthermore, since assemblage thinking sees the world as multi-layered instead of formally structured, it allows us to approach the city from different angles, capturing the different perspectives on urban objects.

Following the discussion of assemblage and relational space, I then go on to discuss what assemblage has to offer critical urban theory. I will argue that assemblage thinking is not at odds with critical urbanism. On the contrary, by introducing assemblage thinking into the discussion of critical urban theory, the political economy of space can also be examined in a more systematic manner. For instance, the neoliberalising of urban governance can be discussed in terms of how the neoliberal logic was gradually folded into the urban assemblage of policies, people, and

environment, instead of being understood as simply replicated from other cities. In the case of Taipei's water governance, it is a long-lived entanglement between forms of human dwelling, the impacts of natural disasters, urban policy learned through international cooperation, and the historical contingencies that accrue to the city. Therefore, assemblage thinking offers a conceptual tool to scrutinise the meshing process of these different urban elements. By delineating Taipei's water governance as an assembling process, the urban process can thus avoid being subsumed under the umbrella concept of neoliberalism, instead being learned through the constitution of its heterogeneous parts. Before further elaboration, I will first demonstrate how the relational turn has transformed urban study, and how it influences contemporary assemblage thinking. I will argue that assemblage theory contributes not only to thinking about space through its external relations with other entities, such as materials, economic flows, and other spaces, but also that it enables an inner look at the internal relations between the things that constitute this particular space.

#### **4.2. Assemblage and Flat Ontology**

Since assemblage thinking emphasises thinking of things in terms of how they came together, and how they otherwise might be instead of thinking them as pre-determined by a higher hierarchy, it is often regarded as ontologically flat, which means it takes all the actors that constitutes a space as significant, albeit some more than others. In the current landscape of human geography, this flat ontology has been lying at the core of the debates over space. To further understand how a flat ontology impacts on the imagination with regard to space, I will first revisit the relational turn of human

geography, which took place in the beginning of this century. Then I am going to explain how this relational thinking laid the groundwork for assemblage theory, and how assemblage contributes to this debate about relational space.

#### *4.2.1. Relational Geography: How Things Become Spaces?*

Relational geography, inspired by the post-structuralist turn in the academic field of geography, argues not to think of space or place by their physical attributes, e.g. area, distance, and the things they contain, but instead to think of space as how they become related. As in Murdoch's words:

*'The relational making of space is both a consensual and contested process.*

*"Consensual" because relations are usually made out of agreements or alignments between two or more entities; 'contested' because the construction of one set of relations may involve both the exclusion of some entities (and their relations) as well as the forcible enrolment of others. In short, relational space is a 'power-filled' space in which some alignments come to dominate, at least for a period of time, while others come to be dominated. So while multiple sets of relations may well co-exist, there is likely to be some competition between these relations over the composition of particular spaces and places' (Murdoch, 2006).*

The 'relations' here, in Massey's words, are *'understood as embedded practices.*

*Rather than accepting and working with already-constituted entities/identities, this politics lays its stress upon the relational constructedness of things' (2005, p. 10).* In

this sense, space is no longer conceived as the inert setting for things to unfold, rather, it should be seen as the process by which things came together, how they gradually

territorialised into the current condition. The spaces were thus being learned through the intertwining of urban materiality, capital flow, mobile policy, and historical contingencies etc., regardless of the physical distance between urban entities. In other words, relational space imagines space only through its formation process, through the territorialisation of the urban entities, not as a given container of urban issues, nor as the production of any pre-existing structure. Such recognition toward space is drastically different from the structuralist imagination of space. To the structuralist body of geographers such as the structural Marxists, space is understood as a surface configured by underlying structures. On the contrary, the relational geographer imagines space as made by diverse processes, e.g. natural, social, cultural etc., and the space has no determining structures (Murdoch, 2006). This recognition of space led to a revolutionary change toward the imagination of scale – flat ontology. From a structuralist point of view, scale was treated as a pre-existing parameter, a nested formation, or in some definitions transgressing the boundaries by engaging the notion of network (see Cresswell, 2012). To argue against such a structural imagination of space, Marston et al. (2005) proposed the idea of flat ontology:

*'[...] our critique is not aimed at replacing one ontological– epistemological nexus (verticality) with another (horizontality). Instead, we propose an alternative that does not rely on any transcendent predetermination – whether the local-to-global continuum in vertical thought or the origin-to-edge imaginary in horizontal thought. In a flat (as opposed to horizontal) ontology, we discard the centring essentialism that infuses not only the up–down vertical imaginary but also the radiating (out from here) spatiality of horizontality' (2005, p. 422).*

By rejecting use of a pre-determined structure as the main explanation for all urban incidents, relational thinking avoids under-mining or over-mining things to their attributes or to the general conditions they are situated in. Instead, relational thinking initiates a more horizontal view of how different elements were engaged in the becoming of the space.

Besides seeing space as a product of interrelations, relational space also emphasises thinking of space as spheres of heterogeneity, and as always under construction (Massey, 2005). Space therefore is regarded as constituted by the on-going intertwining of different entities, while at the same time it was space that made possible such continuing interweaving of different entities. Though relational geography has changed people's imagination of space and scale, to some, it does not necessarily mean that the territory and region have become less important. As Jones has argued:

*'Sociospatial relations are consequently neither automatic nor naturally necessary features of capitalism. They are deeply processual and practical outcomes of strategic initiatives undertaken by a wide range of forces produced neither through structural determinism nor through a spontaneous voluntarism, but through a mutually transformative evolution of inherited spatial structures and emergent spatial strategies within an actively differentiated, continually evolving grid of institutions, territories and regulatory activities (Brenner, 2003, Jessop et al., 2008). In short, constructed and always emergent space matters in shaping future trajectories' (2009, p. 497-498).*

This gradual, emergent feature of assemblage distinguishes it from other thinking



frameworks such as actor network theory. Since it takes space to be a co-evolving process instead of total integration, entities do not dissolve into the seamless whole as they do in actor network theory. With assemblage theory, urban entities are considered capable of growing in or out of the urban assemblage. This perspective hence places emphasis more on the way that entities are being territorialised into the assemblage, and are being coded so as to strengthen the assemblage, or otherwise. Given that sociospatial relations have been growing into each other, they are neither determined by the structures nor are they emerging entirely spontaneously, without the attachment of space. In that sense, relational geography should not be recognised as the total abandonment of structural geographical thinking. Instead, it should be considered a gentle shifting toward the ‘flat ontology’ which emphasises things themselves for their being, their interactions, and how they shape each other. The imagination of space, therefore, is renewed into the ‘sticky’ realm that things tend to be anchored in (see Cresswell, 2012). In that sense, relational space is not only defined by its external relations with things outside the space. Rather, it is also constituted by its internal relations, the relations between the things inside this space. Assemblage theory therefore contributes to this multiple definition of space by providing the delineation of these external and internal relations in a procedural manner.

#### *4.2.2. Assembling for Urban Justice and Materiality*

In his paper, McFarlane (2011a) reconciles the realist political economy and the poststructuralist assemblage theory by pointing out what assemblage might offer to

critical urban theory. He demonstrates the three contributions that assemblage offers. First, due to its descriptive orientation, assemblage could provide a clear portrait of the unfolding historical urban process, whilst acknowledging the contingencies which cannot be reduced to a predetermined structure. This leads to the second contribution assemblage makes, which is to closely consider the force of different materials while we conduct urban critiques. By examining a variety of materials such as policy documents, housing and infrastructure materials, knowledge transferring processes, bureaucratic systems, climate events etc., and the way these entities interact, the potentialities that emerge along with these relations can thus be identified. The third contribution, according to McFarlane, is a different imagination of the city as cosmopolitan, where things encounter each other and grow together, exercising their different potentialities.

While acknowledging the empirical and methodological applications that assemblage provides, Brenner et al. (2011) are suspicious of the lack of reference to key concepts in the radical urban political economy, and the ambiguous ontological basis of assemblage urbanism. They claim that assemblage theory may thus leave much social, economical, political reality unattended. Without the reference to these ‘contexts of context’, assemblage urbanism may end up depriving itself of the analytical tools for approaching reality, asking key questions, just like what Sayer (1992) termed ‘naïve objectivism’ (Brenner et al., 2011). In response to Brenner et al. (2011)’s critique, McFarlane (2011d) points out the possibility for multiple ontologies, ‘*where different urban assemblages enact different ways of being and multiple realities*’ (p. 377). By multiple ontologies, McFarlane means ‘*the positions jostling, debating and posing*

*different questions, differently sharing and diverging connections, approaches and ideas between and across one another*' (p.377). For instance, for the central issue of political economy like capitalism, instead of seeing it merely as a pre-assumed structure that determines all the actors, assemblage thinking sees capitalism also as *'structured not by an essence or the primacy of a centre, but by multiple logics that interact with one another and are entangled in and entrench social hierarchies'* (p. 378). In this sense, assemblage urbanism should not be treated as a rejection of urban political economy, but should instead be seen as a conceptual tool for capturing the heterogeneous urban socio-spatial process, which capitalism may or may not take part in. Therefore, to apply assemblage urbanism to radical urban issues is not to take capitalism out of the urban equation, but instead to continue referencing the historical process of capital accumulation and uneven spatial development without presupposing the importance of these urban factors. Despite the rejection of a thinking reality as an all-fixed structure, assemblage, at least in DeLanda's version, is a realist one (Harman, 2008). Assemblage is grounded in an ontology that insists on a world existing independently from the human mind. What distinguishes the ontological basis of assemblage from the one that many critical urban theorists depict is that assemblage sees the world as *'filled with individuals of countless different sizes, and in each case they must be understood through the concrete historical-genetic process through which they appeared, not as instances of an essence shared by many concrete things'* (Harman, 2008, p. 370). In other words, what assemblage is against is the tendency to reduce things into essences, not realism per se. It argues for attention to be given to the capacity or potentiality that each entity shows during its encounter,

and the unintended outcome this encounter may lead to. This is the reason assemblage is reckoned as being able to grant voice to the materials involved in the process of territorialisation, and also the main reason I employ assemblage theory as the way to elucidate the complex entwining of Taipei's urban dwellings and water management programmes.

Taipei's case of water governance involves the relocating of squatters, and rehabilitating the waterfront. Though this case can be compared with other similar cases of urban gentrification, which stress the unequal power between the developmentalist urban governance and the urban habitants, it falls short of emphasising the role of urban water. Urban water in this context concerns the transformation of people's recognition of water, the power water reveals as floods strike, the shifting regulation of informal settlements, and the different ways people interpret newly announced urban policy etc. By adopting assemblage as the way to scrutinise the intertwining process of floods, new urban planning/engineering knowledge, urban immigrants, urban policy transfer, historical contingencies, and the logic of capitalism, not only can Taipei's water governance can be understood as the ceaseless negotiation of these urban entities, but this case can also provide a new scope for the discussion of urban water, viewing water as something capable of influencing urban policy as it reveals different potentialities under different circumstances. By delineating the interweaving processes of these urban actors, urbanisation can be captured in a more grounded manner, avoiding overly simplifying the complicated urban condition. More importantly, the often overlooked, mundane urban things that change the urban formation can thus be recognised for their

involvement with the topics that concern urban geographers: urban inequality and injustice.

### **4.3. Conclusion**

Marxist critical urban theory has prevailed in urban studies since the 1990s. With critical insight from the Left, it has been fertilising urban study with its attentive focus on issues like gentrification, uneven urban development, and neoliberal urbanism. However, since the role of the non-human has become increasingly important in urban geography, the more structured version of urban ontology, which was commonly adopted by critical urban theory, has become somehow insubstantial when it comes to the force of natural objects. Assemblage thinking in this sense contributes to urban theory with a layered imagination toward the urban world, providing a more diverse concern with the city. Since it sees the world as layer after layers of assemblages, the world was thus regarded as constituted by the intertwined relations between different entities. This brings the sense of uncertainty to the assemblage given that the relations constituting the assemblage can always change due to the demonstration of different potentialities in its components. However, this is not to say that urban assemblage should depart from the main concerns of critical urban theory. As argued by McFarlane (2011d), urban assemblage offers critical urban theory a new scope by re-thinking urban political economy in terms of the logic of capitalism, as a force that co-functions, and co-evolves with other entities of the urban assemblage, transforming the processes of urbanisation. In that case, not only can each component part of the urban assemblage be recognised, but more importantly, all the various,

diverse forms of urbanisation can thus be understood for their own unique assembling process. By adopting assemblage as a way of thinking the city, cities themselves, as pointed out by Robinson (2006), can be imagined as the result of their own unique processes.

By employing assemblage as a way of thinking, this project aims to accomplish three major goals. First, by thinking the urban dwelling relation as an assemblage, I hope to demonstrate how heterogeneous urban entities hold together, co-evolving into a new urban landscape. Second, since assemblage thinking can take urban materials into the consideration of urbanisation, the capacity of water being exercised during the process can be further recognised. Finally, by incorporating assemblage thinking into the main concern of critical urban theory, this project hopes to draw more attention to the inequality caused by new water knowledge and the planning ethos, which cannot be explained extensively by the usual suspects of urban gentrification.

## **5. Urbanisation in Taiwan**

After reviewing related literatures in the previous chapters, this chapter brings the focus back to the actual site of the project, the urbanisation of Taiwan. This chapter first gives a brief introduction on Taipei's urbanisation, and the contribution this urbanisation process provides to the current urban theories. Building on Robinson's (2006) idea of *Ordinary Cities*, this chapter aims to demonstrate Taipei's urbanisation as a way to conceptualising the city. By doing so, the urbanisation process can be conceptualised from the receiving end of mobile policy, as the co-constituent of travelling urban policy, urban water, and the country's historical contingency, providing a new perspective on urban formation. Following that, this chapter draws attention to the two cases of this project – the Xi-Jou tribe and the veteran houses along the Liu-Gong channel. With the brief introduction of these two sites, I will point out how these cases can represent the re-territorialisation of Taipei's waterfront, how urban water, the new idea of ecological engineering, and urban informality took part in the city's formation, and how this re-territorialisation process disrupts the dwelling relation between the urban waterfront and people.

### **5.1. Taipei: An Urbanisation Experience from Global South**

Being at the receiving end of urban policy transferring, Taipei's urbanisation is a constantly adapting to the urban knowledge transferring from other cities, and to its emerging urban conditions. Taipei's urbanisation began under the Japanese Colonial

Rule, and largely proceeded after Chinese Civil War<sup>1</sup>, when the KMT regime relocated to Taiwan, bringing almost 1.2 million mainland migrants (Li, 1970) with it. Struggling with the sudden increase of population and the chaotic economical situation, the KMT soon turned to the US Advisor Group for assistance once US-Aid<sup>2</sup> was made available on the outbreak of Korean War in 1950. After the outbreak of the Korean War, Taiwan was considered a frontline ally of the Western world. For the sake of keeping Taiwan stable, the US government granted Taiwan a huge loan, which was known as US-Aid, to help Taiwan develop its economy. From the 1950s to the 1960s, Taiwan received \$1,400 million in economic aid and \$ 2,300 million in military aid among other technical cooperation and academic exchanges (Chang, 1965). As McFarlane (2011c) said about foreign intervention, the foreign intervention from the US in this period was not only intended to stabilised its frontline allies, but also to better possess these countries by incorporating them into the Western development model; or to put more specifically, within the US urban development model. With the help from the US, many public infrastructures were unveiled: roads, drainage, electricity and more. Therefore, the urbanisation experience of Taipei, was an experience of learning from Western modernisation, especially from the cases of US cities. In other words, the US experience of urban modernisation, under the circumstances, gradually became the norm in Taiwan. All the convenience, tidiness,

---

<sup>1</sup> Chinese Civil War was fought between the Chinese Nationalist Party (a.k.a. Kuomintang, or KMT) and the Communist Party of China. The war started in 1945, at the end of the Second World War, and ended in 1949 when the Communist Party took over Mainland China and the KMT-led regime fled to Taiwan.

<sup>2</sup> US Aid was issued under 'Economic Cooperation Administration, Mission to China' in U.S. Government



and efficiency the Western modern city provided became considered as signs of urban progression, as things to be pursued in Taiwan's urban development. To the Taiwan people, what the US Advisor Group offered was far beyond the actual money and technology for Taipei's urban construction. It was rather a demonstration of what a city should be like, a mental picture of a Western-like Taipei. That being said, the urban knowledge learning from the Western cities cannot be stretched enough to cover all the issues within the city. Taking the mainland migrants as an example, since the sudden increase of population created the huge demand for housing in the city, the KMT regime had to tacitly permit the informal settlements in order to accommodate the huge population. The existence of such informal settlements became at odds with the rational, organised urban planning learning from the US, and was treated as part of the city's urban informality, as the residual of Taipei's primitive past. This thesis therefore aims to particularise Taipei's urbanisation process by emphasising the city's policy learning process and its adaption through each historical contingency. By thinking of Taipei as a city at the receiving end of policy transfer, this thesis therefore puts the policy learning process into consideration, re-thinking the urbanisation of Taipei as the constellating of each process of learning, interpreting particular urban policy, employing particular technology, and the occurrence of certain historical events. By emphasising how the urban constituents add up, co-evolving into Taipei's current urban landscape, this thesis provides a Southern perspective on urbanisation, avoiding over-generalising the different strands which contributed to Taipei's urban formation (see Figure 5-1). In the following section, I delineate the cases of this project in a more detailed manner, distinguishing the heterogeneous constituent parts

of Taipei's waterfront assemblage, and their assembling process from a more grounded perspective.

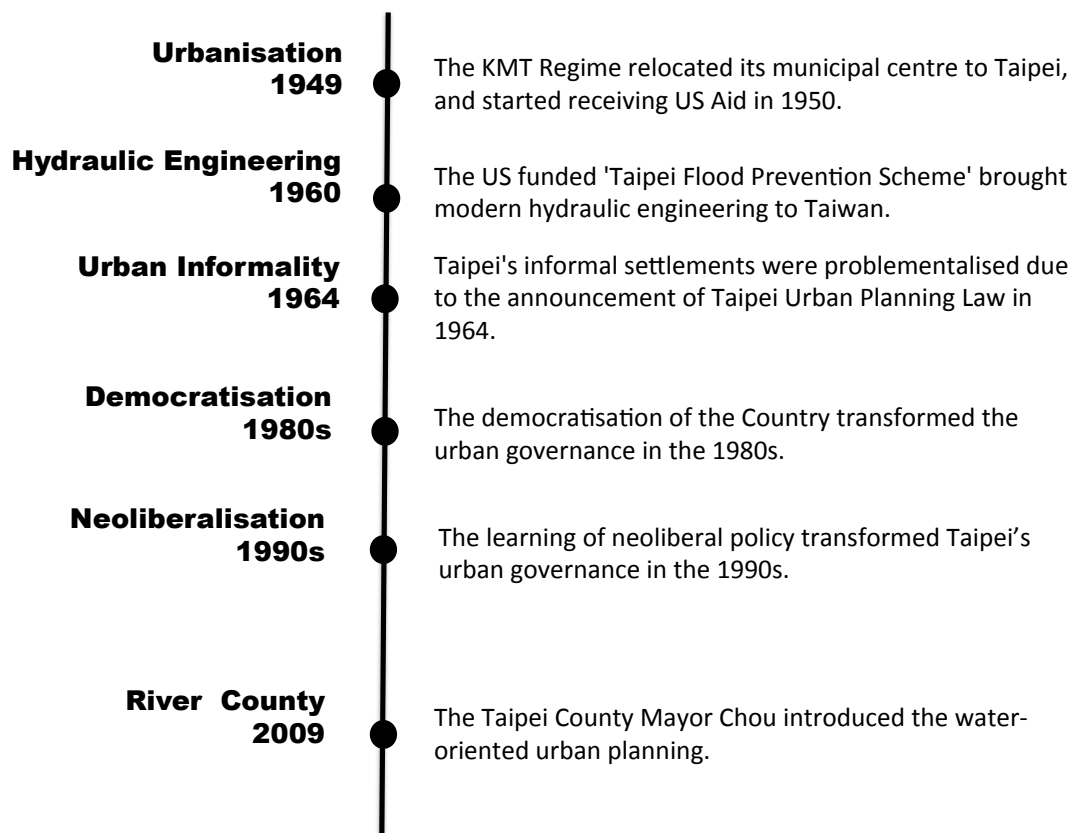


Figure 5-1 The major transformation through Taipei's urban development.

## 5.2. Room for Water, not for People?

The case study of this project mainly focuses on Taipei's urban water governance, especially the 'River County' scheme, which was launched by the Taipei County government. The River County scheme was initiated in 2009 as the master plan for Taipei County by Mayor Chou Hsi-Wei to tackle the long-standing problem of Taipei County, mainly floods and water pollution. Since Taipei is a river basin located in a sub-tropical island, the floods caused by typhoons and torrential rain are not

exceptional scenarios in Taipei's urbanisation process. Taipei's development, therefore, is the constant human attempt to adapt their living style to the floods. This problem of urban floods was made even worse as the city continued to grow, bringing more population into this metropolis, whilst the incidence of extreme weather events was increasing. Figure 5-2 from *Climate Change in Taiwan: Scientific Report 2011* public by the Academia Sinica of Taiwan shows that the number of torrential rains and extremely torrential rains is increasing in the long run. This means that Taipei metropolitan may be exposed to the threat of more and more floods. And this increasing pattern of floods continues to take part in the urbanisation of the city.

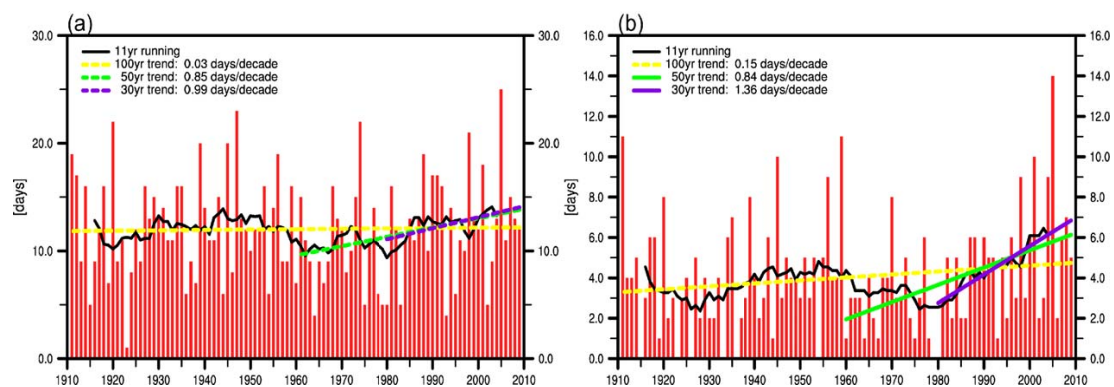


Figure 5-2 The number of days of torrential rain in Taiwan.

Figure (a) shows the torrential rain (daily precipitation  $\geq 130\text{mm}$ ) and (b) shows the extremely torrential rain (daily precipitation  $\geq 200\text{mm}$ ) in Taiwan from 1911 to 2011. The Moving Average is drawn in black line. The 100-year regression line is drawn in yellow line, and the 50-year regression line in green, the 30-year regression in purple. The solid line means the confidence interval of the regression slope is 95%, the dashed line means otherwise. Source: the Academia Sinica of Taiwan

The urbanisation process of Taipei is not only a continuing struggle with floods, but also a striving against river pollution. Since Taipei metropolitan, which consists of municipal Taipei City and Taipei County, was growing a lot faster than the city's sewerage system, the Tam-Sui river in the city was coming under severe pollution

from the domestic sewer. Adjacent to most of the Tam-Sui river system, which is 158.7 kilometres long and flows across a 2,726 square kilometre area watershed (see Figure 5-3), Taipei County suffered the most from the disastrous urban floods. Therefore, the primary goals of the River County scheme are to control the urban river pollution, ease the threats of urban floods, and regenerate the urban waterfront.

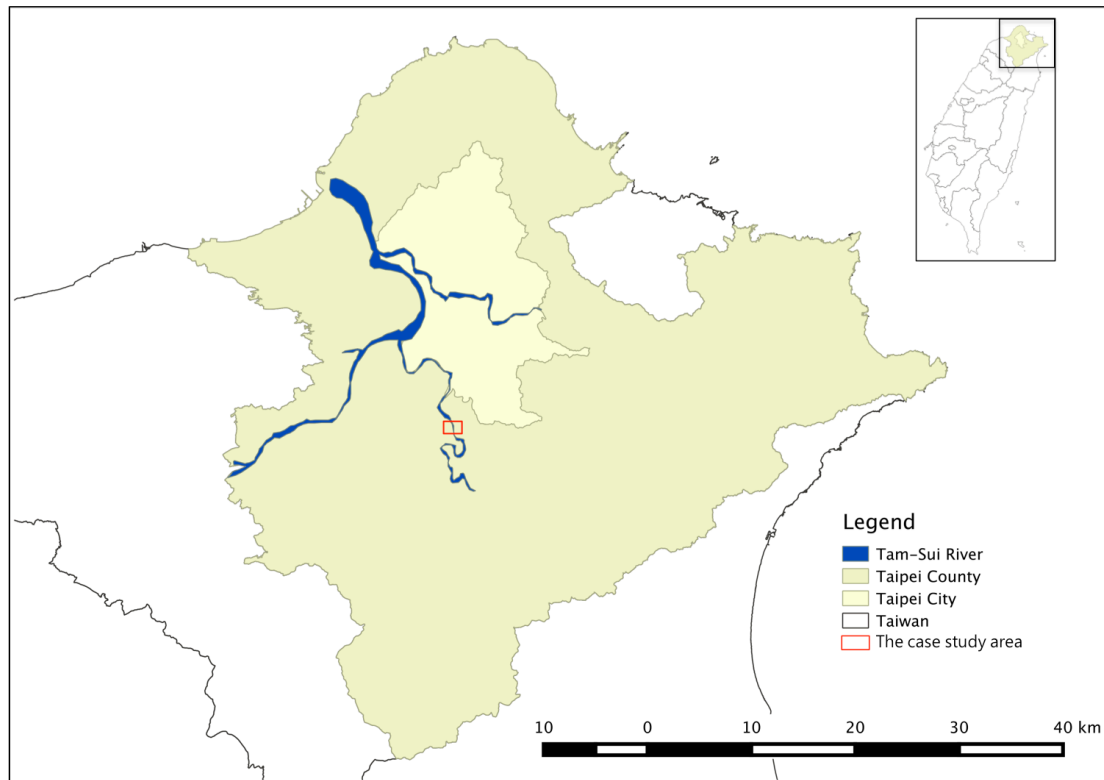


Figure 5-3 Tam-Sui River system and the Taipei Metropolitan

In order to do so, the city's deputy mayor Lee Hong-Yuan introduced the 'Room for the River'<sup>3</sup> concept. The Dutch Room for the River Programme mainly emphasised leaving waterfronts for less condensed usage, creating more space along the river for flood detention instead of blocking the floods with higher dykes. By providing more room to contain the floods, the programme is expected to mitigate the threat from the

<sup>3</sup> The Dutch Room for the River Programme is a programme initiated in 2006 in response to the floods of 1993 and 1995. See the website <https://www.ruimtevoorderivier.nl/english/>

higher water level under the changing climate. In order to achieve this goal, the County Government also established many flagship projects for each local area, setting themes for these places' waterfront rehabilitation. The Big Bi-Tan project<sup>4</sup>, for one, is the waterfront-rehabilitation plan for the waterfront area in the Xin-Dian District. Through evicting illegal factories, informal settlements, and vendors from the waterfront, the County Government hoped to increase the volume the river channel can contain during the flood season, whilst generating tourism and real estate development at the same time. Under the circumstances, the River County Scheme was proposed to re-design the waterfront according to new methods, which were learned through urban policy transfer from the Dutch 'Room for the River' project. Having said that, the newly introduced planning ethos has collided strongly with urban informality, which has been in existence in the city for over half a century. With the case of two relocation plans, I aim to delineate how the human dwelling relation has been transformed by the coming together of urban informality, new knowledge over urban water, and the logic of neo-liberalism.

The two cases of this thesis were both parts of this Big Bi-Tan renovation project. The Xi-Jou Tribe (see Figure 5-4), an indigenous tribe that is located in the watershed of the Xin-Dian Stream, was planned to be relocated to a condominium that is 20 km away from the tribe's original location. Since the Xi-Jou tribe exists on the riverbank of the Xin-Dian Stream, the tributary of the Tam-Sui River, it was planned to be relocated so that there will be more room for floods in the floods season, and so that the threats of flood to the tribe can also be reduced. Though in the name of securing

---

<sup>4</sup>For the introduction of the plan, see [http://www.wrs.ntpc.gov.tw/\\_file/1062/SG/31112/D.html](http://www.wrs.ntpc.gov.tw/_file/1062/SG/31112/D.html)

the tribe, this relocation plan was largely objected to by the tribe for its lack in consideration for the actual people. The people living in the tribe, mostly *Pangcah*, are the descendants of the early urban migrants from the eastern part of Taiwan during the urban sprawling of Taipei during the 1980s, and later on were known as urban indigenous. For the people of the tribe, moving into a public condominium meant not only having to bear the economic burden of rent, it would also jeopardise the function and the identity of them as a tribe due to the drastic change in their living environment. As a way to mediate the relocation plan for the residents in the Xi-Jou Tribe, the County Government employs a community planning system as the way to negotiate with local people, hoping to engage people within the conversation concerning complex urban issues, including: urban security, housing, sanitation, economic development, culture, and identity.

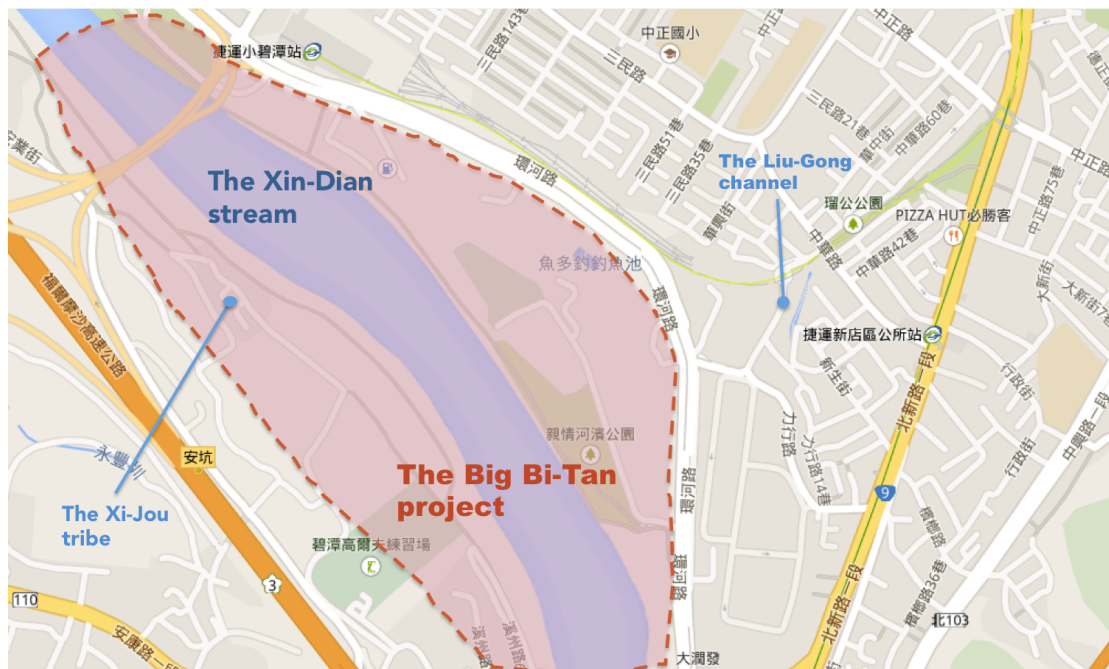


Figure 5-4 The geographical relation between Big Bi-Tan project, the Xi-Jou tribe, and the Lu-Gong channel.

Source: The map is retrieved from Google Map, and edited by the author.

The other case study is that of the veteran houses situated along the Liu-Gong channel. This neighbourhood is inhabited mainly by the old veterans from the Second World War and the Chinese Civil War. Since these veterans were either too low in rank to be allotted proper accommodation or were discharged early with too little pension, they had to find themselves places to live. The veteran houses along the Liu-Gong channel were situated between the channel and the Zhong-Xin military camp. With their limited resources, these old veterans managed to level up the little pieces of land shovel by shovel, constructing their own houses from scratch, putting roofs over their own heads. To put it simply, this form of informal urban dwelling is actually a way of coping with economic hardship during the post-war years. Failing to provide proper housing policy, the KMT regime had to tacitly permitted the existence of informal settlements. Therefore, when the Liu-Gong channel renovation project proposed under the River County scheme plans to remove the 107 households of these informal settlements, the local communities became worried about their survival. According to the Liu-Gong channel renovation project, once the old veteran houses were demolished, the channel could thus be widened, creating more room for drainage. Meanwhile, since these informal houses were not connected to the sewerage system, this demolition could also reduce the urban water pollution from the domestic wastewater in the neighbourhood. Though these two waterfront renovation projects both claim their positive influence on the urban waterscape, the major critique they were facing was arguably the displacement they may do to the local communities. That is to say, the threat of displacement and the benefit of flood control and urban sanitation can be treated as a collision between the newly introduced logic of urban

water and the prolonged urban informality of the city. Given the complicated situation and the multiple issues these cases involve, these cases can no longer be fully comprehended by the concept of gentrification, which stresses the economic process of real-estate development that drives the original tenants away. Furthermore, given that this social exclusion was not just caused by the pursuing of an urban greenbelt, but was rather being facilitated by the hydrological rationale under the logic of urban adaptation, these changes of recognition toward urban land use and urban water should be identified. Since water in these cases plays a crucial role in the transforming of urban dwelling relations, this project adopts assemblage as the way to capture the heterogeneous, dynamic co-evolution of urban water and other entities such as urban entrepreneurialism and communitarianism, in order to make sense of the complex issues involved in the transformation of Taipei's urbanisation.

### **5.3. Conclusion**

In this chapter, I have explained how this project provides a new angle to conceptualise urban formation. By thinking about Taipei's urbanisation from a Southern point of view, this project pays attention to the process of policy adaptation, re-thinking urban policy transfer as an accumulation of pieces of actual urban policies, the methods adopted on the ground for flood control. In doing so, the translating of urban policies, the negotiation between certain policy and actual urban condition, and its interaction with particular historical circumstances therefore can be distinguished through the discussion. Also, the participation of Taipei's heterogeneous urban constituent parts, e.g. urban water, urban informality, and urban water, therefore can



be recognised. In the next chapter I further illustrate how assemblage can be used in the understanding of the displacements in these two cases. I argue that assemblage theory offers a comprehensive delineation toward Taipei's waterfront renovation, seeing it as not merely the engagement of economic incentive, but furthermore the transformation of people's imagination toward the best practice of waterfront governance, and a rational, efficient, economic way of land use planning.

## **6. Research Methodology**

In the last chapter, I have emphasised the importance to conceptualise urban from a Southern perspective, taking all the constituents as significant to Taipei's urban development. With the introduction on the case sites of the project, the last chapter has also demonstrated the participation of Taipei's different urban entities: urban water, engineering technology, urban informality, and neo-liberalisation. In order to capture the multidimensional interactions between these urban parts, this thesis therefore adopts assemblage as a concept that draws attention on the process of the co-functioning of different urban entities. Through the employment of assemblage thinking, I will first demonstrate how the processual understanding of the city provide a clearer scope for the becoming of Taipei, especially the interweaving of the city's key components – urban informality, water, and urban entrepreneurialism. Meanwhile, this project also wants to bring assemblage to a more executable level, using it as a descriptive tool at same time an analytical tool for the analysis of the power relation between these urban constituents. Therefore this chapter will also introduce the way assemblage is employed as both a descriptive tool and an analytical tool for investigating the power relations in Taipei's waterfront renovation project. Through sorting out of the city's historical incidents in the formation of Taipei's waterscape, and analysing the negotiating process between different knowledge, discourses and policies, this section thus demonstrate the way assemblage theory is used for distinguishing the heterogeneous parts in the urban formation process. In the

concluding section, I then stress the critical implication of applying assemblage theory in this project.

### **6.1. Assemblage as a Methodological Tool**

As discussed in chapter 2, assemblage contributes to urban study in many different ways. On the conceptual level, it emphasises the heterogeneity of things that constitute an assemblage, regarding things in a processual manner, as the interweaving of inter-related objects (Anderson and McFarlane, 2011, Farías, 2011). It distinguishes things as spatial-temporal assemblages that were shaped by various power plays (Lin, 2007, Allen, 2011, Legg, 2011, McCann, 2011). In this project, assemblage can first be used to conceptualise the formation of Taipei's urban waterfront. By thinking the constitution of Taipei's waterfront as the assembling of urban water, urban informality, and neoliberal urban policy, the force of floods, sewer, water infrastructures, informal settlements, and the waterfront regeneration programme can therefore all be considered as relevant to the shaping of Taipei's waterfront space. With the description on how each catastrophic flood event change the course of urban flood defense measures, how the invention or introducing of new idea in flood control changes urban policy, the urban component parts can therefore be recognised for their strength in shaping the city, and for the unexpected outcomes they co-produced with the urban assemblage. That being said, the employment of assemblage thinking would not stop here. Since the component parts of an assemblage can also be thought as an assemblage, the entities of Taipei's urban waterfront can also be treated as in transformation. For instance, urban informality is the constituent

part of Taipei's urban waterfront, at the same time an assemblage, which consisted of the authoritarianism, the lack of housing policy, the introducing of cheap and convenient construction materials, and the democratisation took place in Taiwan. Therefore, to employ assemblage as a concept is really to take all the entities, which may appear minor in the urban formation, into the consideration. That way, the urban informality in Taipei can avoid being taken as just informal settlements, as irregularities of urban planning. The urban waterfront of Taipei would not be conceptualised as a merely landscape dominated by the neoliberal logic. Rather, the neoliberal policy can be seemed for its transformation through its interaction with the water and informal settlement. The urban waterfront can be re-thought as the consequence of the potentialities all the urban constituents have brought.

In the light of assemblage theory, this research was framed with three major questions.

- First, how does the city's climate condition, informality, and the learning of new urban policy co-constitute its unique waterscape?
- Second, how does this formation of urban assemblage transform the human conceptualisation of water? How does it consequently disrupt the existing dwelling relation?
- Third, what kind of social inequality may occur in the meshing process of these urban constituents?

By asking these three questions, this project seeks to understand the formation process, and the power relations of the waterfront regeneration plan. Furthermore, through this delineating process, I hope to uncover any inequalities taking place during the process. In the light of assemblage theory, these inequalities can be treated as the effect of the

constellation of these urban parts, instead of seeing these effects as the result of one dominant force, such as neoliberal urbanism.

## **6.2. Data Collection**

In the work of Anderson et al. (2012a), they stressed: '*what assemblage thinking offers is a specific way of attuning to a world of differences that makes a difference beyond a general and unsurprising claim that everything acts*' (p. 213). To bring assemblage theory to a more executable level, this section would clarify how the component parts are being identified in Taipei's waterfront assemblage, and how these parts are scrutinised for their interactions.

### *6.2.1. The Choreography of Data Collection*

In fact, the eviction caused by waterfront regeneration in Taipei is not new to the city. Throughout the history of Taipei's struggle with urban floods, clearing the waterfront has often been deemed the first step for embankment. Having said that, the cases of the Xi-Jou tribe and the old houses along the Liu-Gong channel in this project showed a different way of participation of urban entrepreneurialism in the waterfront assemblage. In order to gain some picture of the negotiation between different urban flows of Taipei's waterfront, I came to Taipei in the summer of 2011, studied some official documents, and conducted interviews with government officials, members of NGOs, and the local people in the communities of the case sites (for detailed information of the interviewees please see Appendix I). Since the assemblage theory

stresses on the forces of all minor participants in an assemblage, and the different potentiality that could arise from their relations, these interviews were conducted in a semi-structured way, which included the key facts of the waterfront regeneration project, but also left room for the expression of personal experiences and opinions. This trip gave me a clearer picture of the power relation between the participants of the waterfront assemblage. It was not until this moment that the key component parts of the waterfront assemblage became clear to me. The second trip in the summer of 2012 was therefore the follow up to my preliminary findings, which has enabled this to illustrate the interactions between the constituents.

#### *6.2.2. The Interviews and Observations*

As Li (2007)'s demonstration of the practices adopted in the governing process of the community forest management showed, the assemblage theory could be employed as a way to illustrate not only the agency of humans, but also the power of different objects. By addressing the roles of each object in the governing practices, their significance can thus be distinguished. In Taipei's case, its waterfront renovation project is not only the carrying out of a new urban policy; rather, it should be treated as the redeeming of its city-water relation. For instance, by illustrating the policy transferring process of the urban flood management, the force of discourses and new concepts can thus be seen in the formation of Taipei's water policy. By addressing the formation process of Taipei's urban informality, the influences of the country's authoritarian past, the sudden migration due to historical contingency, the negative view of waterfronts due to floods and pollution can all be attended to as a part of

Taipei's land use governing practices, which fundamentally affects the city's unique dwelling relation in the waterfront area. This way, assemblage theory also resembles Foucault's idea of apparatus, which address the practices and discourses with a more governmental focus (Legg 2011). By delineating the county's government's employment of community-planning systems, the penetration of the neoliberal ethos, the cultural character and the nostalgic affection toward the local communities can thus be recognised.

In order to further scrutinise the relations between the constituents of the waterfront assemblage, the interviews were conducted in slightly different ways. The interviews with the government official and the NGOs were relatively straightforward, and the contents were simpler. They were mainly focus on the formation of urban policy:

*How the water-oriented urban planning was mediated to the County? What methods were used in the enforcing of this policy? What technology was adopted through the waterfront rehabilitation? What is the Government's plan for the informal settlements?*

The interviews with the local people in the informal settlements were conducted in a less formal way, not only to make the interviewees more comfortable, but also to provide more room for the interviewees to express their personal experiences, opinions, and all kinds of thoughts, which may seem irrelevant at first, but prove very fruitful in the end. For example, one of the interviews I conducted in the Xi-Jou tribe took place in the front of a local grocery store. It turned out to be more like a long chat, regarding his personal life, his opinion of the regeneration project, and his feelings towards all the change. As we were talking, some people casually joined the conversation, giving me different ideas about the tribe and the regeneration project. In

my interview with one resident who lives along the veteran houses, we talked as we strolled down to the local market, she purchasing the daily groceries for her family. I also attended their strategy formulation meeting for the waterfront regeneration programme. This way, not only could I gain their opinion through the interviews, but more importantly, I was also able to see how people live together as a tribe, as a neighbourhood, how they interact with each other and the physical environment around them. This process also allowed me to adjust many faulty assumptions of the project, initiating many inquiries and explanation that I would otherwise have overlooked.

### *6.2.3. Second-Hand Data Collection*

The descriptive orientation enables assemblage theory to demonstrate how each constituent actually participates in the formation of assemblage instead of attributing all things to the consequences of one encompassing force. This project therefore also focuses on the participants from the past that shaped the waterfront into its current form through re-visiting the historical events. In order to reify the interaction between urban entities, I chose a few urban entities as the key component parts of Taipei's waterfront assemblage, which included informal buildings, floods, sewerage system, drainage, tap water, the Xi-Jou tribe, the Liu-Gong channel, and Lee Hong-Yuan. Using these terms as key words, I built a database for the 1,742 related news clips relating to Taipei's waterscape formation from thousands of news since 1951. Based on that, I established the timeline of Taipei's waterfront development, and each new clip is treated as proof of the existence of the water governance related events. For



example, the serial news reports of typhoon Pamela in 1971 clearly stated the magnitude of the typhoon, the damage it caused, the awareness it raised for urban land use planning, the stepping in of the US advisors, and the government plan for urban flood defence. These events reify the rise of Taipei's demand for flood control measures and its employment of modern hydraulic engineering, and denotes a new urgency for Taiwan's urban water governance. By keeping track of these news events and the second hand data, the key elements in the formation of Taipei's waterfront can thus be recognised for their shaping on Taipei's waterscape, and their transformation under the coding of the waterfront assemblage. Along with the government reports pertaining to the legislative process of laws and regulations, these storylines exhibit the influences of each component part on the assemblage of Taipei's urban water governance. The contingency that is stressed in assemblage theory can also be addressed by taking the historical contingencies into consideration in this Taipei water governance assemblage.

#### *6.2.4. Analysing the Data*

After transcribing the interviews, I found it helped to categorise the contents into different groups. By doing so, it became clear which discourses or practices were guided by particular forces, such as the scientific order of hydrological engineering, neo-liberal logic, or the justification for urban informality. This identification of participants certainly helps in thinking about how different strands of urban flow co-constituting Taipei's waterfront assemblage. Furthermore, the writing of the cases is also an analytical process, which helps in elucidating the multitudinous relations

between different urban objects.

### **6.3. Conclusion**

After the two chapters discussing the contribution that assemblage has to offer in the urban study, this chapter gives a more concrete introduction to the way these insights are being translated into actual executable research methods. This chapter demonstrates the way assemblage is being employed as a methodological tool.

Adopting assemblage as both a way of thinking and a research method provides a processual thinking that not only takes all urban parts into consideration, but also re-sees governance as a collective of forces that were shaped by discourse, policies, knowledge, and experts. In doing so, assemblage thus also provides a new scope on the inequality that was congregated through the assembling of different objects and power relation. The inequality in the case of Taipei's waterfront regeneration can thus be conceived as more than just the social exclusion the project creates, but as the re-shaping of ideology of urban water and urban water governance at the same time. By seeing the urban water governance as an assemblage of practices, we can thus identify urban inequality as formulated through the transforming of human conception, the framing of discourses, and the carrying out of urban policy.

## 7. Governing Urban Bad Water

### 7.1. Introduction

Taipei's waterscape had always been a conundrum to its citizens. When typhoons strike the island every summer, the gigantic amount of water they bring at times paralyses the traffic, soaking cars and other properties (see Figure 7-1, Figure 7-2), causing damage to the urban economy and threatening the safety of citizens. Taking Typhoon Nari that struck Northern Taiwan in September 2001 as an example; since it brought 425 mm of precipitation per day to Taipei, causing over 300 casualties and costing billions of NT Dollars over the whole island<sup>5</sup>, it became a nightmare for people, and a bitter lesson for the local government. Yet, Taipei's waterscape is at the same time the pride of the city, at least for some. As stated by Lee Hong-Yuan, an experienced technocrat with a long history of being involved in Taipei's water governance:

*'The Taipei Flood Prevention Scheme was the pride of ours in the past. We spent 250,000 million NTD on it. There was no other country that ever spent that amount of money to protect a city except for what Japan did for Tokyo' (Lee, public speech in National Taiwan University, 21-09-2010).*

Throughout the history of urbanisation, the city had invested incalculable time, money, and human labour into the city in order to build a flood defence system to protect

---

<sup>5</sup> For more, please see Typhoon Database, The Central Weather Bureau

[http://rdc28.cwb.gov.tw/TDB/ntdb/pageControl/typhoon?year=2001&num=200116&name=NARI&from\\_warning=true](http://rdc28.cwb.gov.tw/TDB/ntdb/pageControl/typhoon?year=2001&num=200116&name=NARI&from_warning=true)

Taipei from floods under the scale of a 200-year flood<sup>6</sup>. Considering Taiwan's subtropical weather and steep terrain, it takes a huge amount of effort to tackle an issue like urban flood. The water governance of Taipei not only involves the city's water management using its own experience with urban water, it is also a long process learning both from flood incidents, and modern engineering knowledge that travels from the Global North. With the assistance of US Aid, the United Nations, and the World Bank, Taipei's urban water governance is actually the assembling of different kinds of knowledge: from the whereabouts of the informal waterfront settlements, to the risk assessments learnt from the West. Water, in this sense, has become a formative power in the city's becoming, and it affects all aspects of urbanisation, including human dwelling, urban security, public infrastructures, and urban landscape.



Figure 7-1 Taipei city centre taken by flood.

Source: United Daily News.

---

<sup>6</sup> A 200-year flood stands for a flood with 200-year recurrence period. This return interval is estimated based on the hydrology of the region.



Figure 7-2 Flood water paralyse the train station.

Source: United Daily News.

The entwining of water and the city is hardly a new topic in urban study. With the influence of relational thinking (Massey, 2005), the city is no longer understood as merely a fixed territory with particular content. Instead, it offers a way to re-conceptualise the city as an interweaving process of people, human knowledge, capital flow, nature, and their relations (Murdoch, 2006). In that sense, water can be understood as a force that co-constitutes the making of a city through its meshing with other urban constituents. With the resemblance between the city and the human body, Swyngedouw (2006b) adopts the idea of metabolism as a metaphor for understanding the hydro-social cycle and the space. By thinking the hydrological cycle as akin to metabolism in human body, the vibrant interchange between different things: urban sanitation, canalisation, and the power struggle between gender, ethnic, and class etc. could be understood as a hybridising process in the city. Swyngedouw (2004) also employs assemblage thinking against the reductionist view, seeing water as layered with its own materialities and relationships with other things. To further illuminate the

power entanglement in which water took part, Swyngedouw employs the case of Spain's hydrological modernisation to explain how water engineering played the leading role in Spain's revival since they lost their colonial possessions. In order to remake the nation, hydrological engineering was adopted as the national project to overcome the escalating domestic contradictions, and the scientific solution to the natural obstacles that prevent Spain from further development (Swyngedouw, 1999, Swyngedouw, 2007, Swyngedouw, 2009, Swyngedouw, 2013). The Deleuzian rhizomic thinking claims that not only can the variety of urban-water relations be captured through description, it but also reconciles with the Marxist concerns for urban inequality through engaging with the hydro-social transformation in the discussion of class, gender, ethic and other kinds of power struggle. This focus of urban metabolism offers a more hybrid image of the city, taking urban natures into consideration of the political and economical inequalities that take place in the city. Urban water, in this sense, is a natural process that is shaped by the urbanising process, and at the same time a crucial force in the becoming of the city.

With the insight from urban metabolism, the Taipei's water can be understood as a forming force of the city's becoming while itself being shaped by the urban socio-natural process at the same time. This chapter focuses on the evolving of Taipei's perception of 'bad water' – which here refers to the dangerous, filthy, non-processed floods and sewerage that threatens modern urban living, as opposed to the domesticated, purified, controlled, commodified 'good water' for drinking, bathing, and baptising, which became sacred through the taming process (Kaika, 2004). Given that urban floods and sewage were not usually regarded as exploitable as tap water or

bottled water -- at least at the initial stage of construction, urban bad water had a hard time engaging with the market rule. By introducing the new urban water-governing ethos from the Dutch integrated water management, the long-standing issue of bad water was incorporated into the neoliberal logic of urban entrepreneurialism, and the existing dwelling relation of the waterfront and the urban squatters was reassembled through the process. With the case of Taipei's urban water governance, this chapter emphasises two issues in urban water: knowledge assembling in urban water governance, and the entanglement between neoliberal ideology and the urban 'bad water'. With the insights from rhizomic thinking on urban metabolism, Taipei's water governing project indicates a new urban-water relation entwined with the neoliberal logic of urban entrepreneurialism, the commitment to the technical solution of water problems, and the renewed conception of urban water that leads to the changing of human dwelling relation, which I will later on characterise as 'hydrological gentrification'.

This chapter begins with the introduction, then I proceed to address how exactly assemblage thinking contributes to the discussion of urban water. I will demonstrate the process by which the modern idea of urban water governance was introduced into Taipei during its development. In this section, I exemplify the co-meshing process of water knowledge, engineering technology, urban technocrats, and extreme weather events, showing the assembling process of each participant in the shaping of Taipei's waterscape. I will also illustrate the moments of disassemblage created by disastrous weather events during Taipei's urban waterfront formation process. In the final part, I demonstrate how the new water-governing ethos introduced from the Netherlands

transforms the existing idea of modern water, initiating new opportunities for urban bad water to be incorporated into the neoliberal logic of urban governance, and eventually transformed Taipei's waterfront.

## **7.2. Assembling Urban Water**

As a country learning its way into modernity through foreign intervention projects provided by the US and the UN, Taiwan's approach to urban water was largely derived from the idea of modern water originating in the West. After the outbreak of the Korean War in the 1950s, East Asia entered the Cold War framework, into which Taiwan was incorporated by the Western Bloc, as against the Eastern Bloc that allied with the Mainland China. Under these circumstance, Taiwan's urban waterscape was mainly established under influences from the West through foreign intervention such as the US Aid programme that introduced funds and experts into Taipei. This knowledge transferring process re-cast Taiwan's idea of urban water into a modern abstraction, which originated from the Western experiences of urban water, but ended up becoming the hegemonic force that shapes the human conception and behaviour of urban water governance in other cities (Loftus, 2006, Ekers and Loftus, 2008, Loftus and Lumsden, 2008, Loftus, 2009a), stripping water from its original social, environmental context (Linton, 2010). For instance, to keep diseases from breaking out in the city, water was rendered as the object to be monitored for its quality. To anticipate the disastrous weather events that could occur in the city, water was approached with scientific models to estimate the amount of precipitation. To finance water infrastructures and enumerate their impact on the government expenditure,



regulations in the institutional level were drafted to keep the watershed free from occupants, and to incorporate water governance in the process of urban development. Through a series of policy learning processes in the form of foreign intervention programmes, Taiwan's water governance was deeply grounded in the Western modern water paradigm, as something that should and could be controlled with scientific technology and rational urban planning. Such a learning process, much like Athens's modernisation of urban water, is a fetishising of water infrastructures as the symbol of progression, the power display of human technology over nature (Kaika, 2005). Through this modern Promethean project, (named by Kaika after a Greek mythological figure who emancipated humanity by giving them fire), water, and since then nature, was transformed into a human artefact that leads people to a cleaner, safer modern world (Kaika and Swyngedouw, 2000, Kaika, 2005).

However, when a series of serious weather events took place, the old model for predicting urban floods appeared to be less convincing. The Taipei County Government, under the circumstances, introduce a new way to solve the flood issue. This newly introduced 'integrated water management' transformed not only the hydrological system of the city in an engineering sense, it also brought a new order to the urban planning ethos and a new urban strategy for economic development. Assemblage thinking here can be used as a descriptor at the same time as being a way of thinking about Taipei's water management. Since the city can be recognised as an 'urban learning assemblage', a process through which people's knowledge and conception of the city is lived and practiced (McFarlane, 2011c), Taipei's water management therefore can be treated as an urban water assemblage. Through learning

about water via their daily experiences and policy transferring processes, exercising their knowledge of water via their daily encounters and public infrastructures, this urban water assemblage is thus formed as the constellation of people's relentless learning process vis a vis water, their actual practices of water management, as well as water's unpredictability, which keeps water's hidden characters being revealed during the natural events. By excavating this urban water assemblage, not only can urban water governance be seen from the receiving-end of neoliberal urban policy (McCann and Ward, 2011), examining the contemporary urban water policy transfer from the receiving-end, but it also offer a new perspective on how the modern ethos of urban water management clashes and co-evolves with Global South issues e.g. catastrophic weather events and urban informal dwellings.

#### *7.2.1. Learning Modern Water*

Taiwan's modern waterscape was mostly formed after Chiang Kai-Shek's army retreated to Taiwan in 1949. Since the pre-war water infrastructures built by the Japanese Colonial Government were turned into debris during World War II, and the new mainland immigrants swamped the capital of Taipei, there was a huge demand for urban water infrastructures initiated during that time. Through the mediating of market economic and scientific urban planning, the city became part of an alliance of the Western free world as opposed to Communist China from the Eastern Bloc. With funds, knowledge and travelling experts, these foreign aid programmes offered Taiwan an easy way into the international labour division of economic growth, ensuring Taipei was on the 'right track' of urban development.

With rapid urban growth and industrialisation, taming Taipei's water became one of the major prerequisites to sustaining urban development. In the 1950s, two issues regarding urban water were raised. First, since securing Taipei from floods was regarded as a precondition for further economic investment in the floodplains, the flood defence construction was in urgent need to ensure the continuing growth of the Taipei area. Secondly, with the urban population multiplying, the city needed the building of a sewerage system, not only for sanitary reasons, but also to divert the urban domestic sewer, keeping the drainage system from being over-occupied in the rainy seasons. Without proper water infrastructures, Taipei was exposed to the threats of disastrous floods and the outbreaks of diseases. Though the demand was urgent, the taming of urban water was not done until a series of catastrophic events occurred in the late 1950s and early 60s.

In 1959, a violent typhoon named Gloria struck Taiwan, causing 667 deaths and 408 people to go missing. Since the infrastructures and crops were severely damaged, the total loss approximated 37 billion NTD. With major destruction like that, a strong public opinion for water governance was forged. In an editorial article in the United Daily News, it was stated:

*'After Gloria, after all the lives and money it took, we as public media demand for a new, improved water governance for the city's well-being in the long-run. Embankment is a way to go, but it may jeopardize the discharging of urban water if a proper sewage system is yet to be built. The infrastructures for flood defence may cost a lot of money, but it will not cost more than floods do. Letting the city flood each year is just a shame for us as Free China, we have to stop*

*floods once and for all' (United Daily News, 14-09-1963).*

This editorial article is a reflection of a rather modernist view toward water. Since the water revealed its fury through the flood events, the modern knowledge of engineering and hydrology was expected to enable human control over urban water, eliminating peril for urban inhabitants. In fact, the urbanisation of Taipei was the dawning of Taipei's modernisation process. Through the cooperation between Taiwan's technocrats and experts from the US, Taipei made its way to urbanisation through learning about the modernised city from the Western world. For instance, to spare Taiwan from experiencing such a huge loss again, the US Aid program granted Taiwan 64,170,000 NTD (United Daily News, 13-1-1960) to construct a flood prevention scheme, hoping the modern hydraulic infrastructure could secure Taiwan's development. With this fund, the Taiwan Province Government<sup>7</sup> decided to make a detailed investigation of the Tam-Sui River, preparing for Taipei's flood defense. Since Taiwan's flood defense project was funded by US Aid, the whole project was under the aegis of the US Government. In fact, the first major flood defence project, the Taipei Flood Prevention Scheme, was led by a group of technocrats trained in Western academic institutes, whilst also under the consultation of experts from the US Advisor Group. With the introduction of hydrology, civil engineering, and some 'successful' cases grounded in the Western context (e.g. the Tennessee Valley Project), specific ideas regarding the way urban water should be controlled, tamed and used was formed. In other words, the urban flood in the Taipei area was identified as

---

<sup>7</sup> In the post war years, Taiwan's state institution remained as when it was on the mainland. Taiwan Province government was the local government of Taiwan Province, which was ruled by the Republic of China (later known as Taiwanese Government).

an issue in the realm of well-established Western hydraulic engineering, while at the same time the threats of floods were framed as a problem that could and should be solved with the measures of modern technology<sup>8</sup>.

With the assistance from US Aid, the Taipei Flood Prevention Scheme was established to protect Taiwan against floods. In this plan, two stages were proposed to control the floods<sup>9</sup>. As a short-term plan, the Provincial Government planned to embank the waterfronts in the city, securing the more prosperous areas immediately from floods while the long-term flood defence project remained on the way.

Meanwhile, the data on precipitation and water level changes was monitored and applied to modern hydraulic models, hoping to discover the best solution for solving Taipei's flood problem. In the long-term plan, waterworks, including dams, sewerage systems, and waterways were designed to protect Taipei against 200-year floods. For instance, the river channel of the Keelung river, which is a part of the Tam-Sui river system, was straightened in 1964 in order to drain the water into the sea more directly, reducing the chance of flooding on Taipei City (see Figure 7-3). To the local governments at that time, the Taipei Flood Prevention Scheme entailed not only scientific methods to keep the city safe from floods, but came as a whole package, which included funding sources, the knowledge and skills to support the plan in both construction and legislation level, and even the way to clear the debt for the project.

---

<sup>8</sup> In fact, modern water controlling measures e.g. dykes and drainage, had already been initiated in Taiwan during the Japanese Colonial time. Yet, most of the constructions were ruined during the air strikes in World War II. Therefore, the flood defence project was considered the momentous work of Taiwan's urban water governance in terms of its scale and function.

<sup>9</sup>The 10<sup>th</sup> River Management Office gives a detailed introduction of the scheme in its website

<http://www.wra10.gov.tw/site10/www.wra10.gov.tw/works0211.html>

Such a Western influenced flood control plan was seen as the promising answer to Taipei's flood problem.

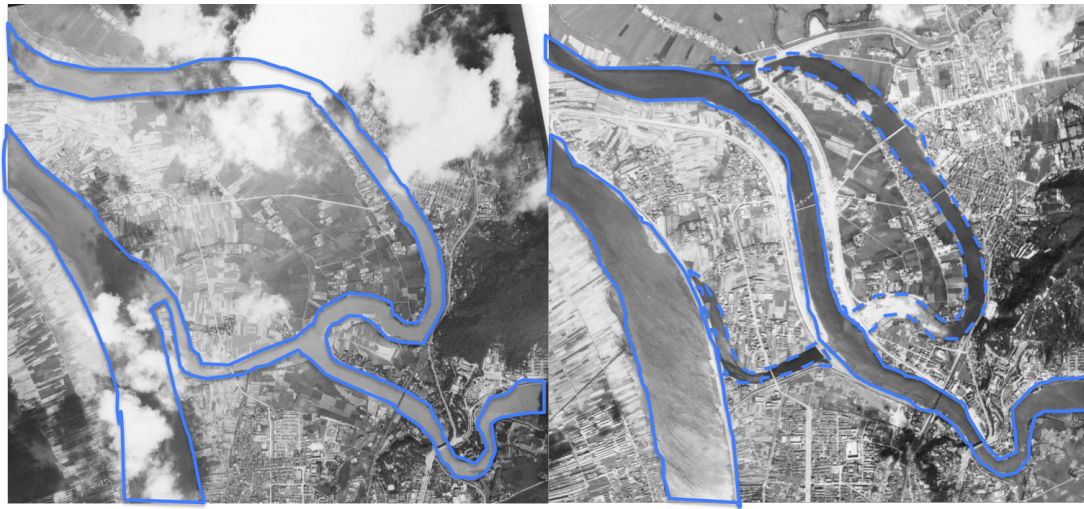


Figure 7-3 The straightening of the Keelung river channel in 1964.

These aerial photos were taken before (in 1956) and after (in 1965) the river channel straightening took place in 1964. The solid line on the left side is the original river channel of the Keelung river, the dashed lines on the right side were the old river channel cutoff by the newly-built artificial waterway.

Source: <http://gis.rchss.sinica.edu.tw/>

### 7.2.2. *Moments of Disassembly: 'Bad Water' in the City*

Though Taipei's water was on the track of modernisation, the unfolding of water works was proceeding at a slow pace, especially the infrastructures of flood control and sewerage. This procrastination was due to two main reasons: the inexploitability and unpredictability of urban bad water. Unlike tap water and bottled water, which was *'turned from an abundant resource, a source of optimism, into a scarce resource, a source of crisis and conflict, threatening to disrupt the functioning of the "eternal" city and its residents'* through exhibiting its scarcity in the event of draught (Kaika, 2003, p. 924), Taipei's urban bad water through the disasters was not redeemed as valuable, manageable through the market rule, and suited for further privatisation.

Instead, it headed in the direct opposite direction, taking it out of the market's reach as it unfolds.

Taking the Taipei Flood Prevention Plan as an example, although it was made in 1964, it was not until 1982 the plan was actually carried out. Since the Taipei Flood Prevention Plan entails not only the considerable cost of constructing the water works, on the top of that there was also a huge spending on the substantial compensation fee for relocating people from waterfronts, where the construction was located. For a country running a tight budget at that time, it was impossible for the government at any level to fund the plan. It was especially so when the government fund had been used up by the construction of embankments in the first stage of the plan. That being the case, the local government took advice from the US Advisor Group, trying to collect the construction fee from the local areas, making the beneficiaries pay for the constructions. Such a 'user-pays' idea was not new to Taipei's urban water governance. In fact, at about the same period, the improvement plan for Taipei's tap water system went quite well. With the deterioration of water from wells and streams, the tap water system soon became popular among people in the cities, since the state-owned water enterprise provided a convenient, cheap water service. Since the quantity of water running through the pipes, delivered and consumed by each household, was relatively easy to be individualised, calculated, and managed, tap water made a great commodity to be regulated through market rules. To the local governments, the water fee was more likely to be paid since this service could be ended once a household did not pay the bill. Therefore, tap water appeared to be rewarding to local governments, since the tap water system could pay for itself; the stable water supply could even

secure the economic development in the city.

Nonetheless, applying the ‘user-pays’ principle to the water works for flood control and sanitation was a different story. Since the safety and sanitation gained through the water works were difficult to measure or individualise down to each autonomous household, it was unlikely the associated departments would be able to collect the money for the service they provided. For example, after Typhoon Pamela struck the Yong-He area in 1961, the local government decided to embank the town according to the water pattern of Typhoon Pamela as a part of the Taipei Flood Prevention Scheme. To fund the project, the Taipei County Government planned to collect the construction fee from local people. However, the floods that came with Typhoon Opal and Typhoon Amy in 1962 showed rather different water patterns from the estimated one (see Figure 7-4). As the Taipei County Government stated:

*‘Typhoon Amy proves that the area that the embankment secured from flood is much less than estimated, so the County Government is not sure about what to do with the construction fee. If the County Government stick to the plan, collecting construction fee from the estimated beneficiary area, the people suffer from Typhoon Amy will definitely refuse to pay this fee; If the County Government waives the whole struck area for the construction fee, there would be a major financial deficit for this project, and who will pay for the rest? At this point, it is impossible to pile the financial shortage on those people who were actually benefited from the embankment, that would be too much of a burden’ (United Daily News, 26-11-1962).*

When the people of Yong-He found themselves still suffering from the floods, they



soon started protesting against the collecting of construction fees. This failed attempt put other projects that planned to adopt the 'user-pays' methods on hold, and slowed the pace of the whole Taipei Flood Prevention Plan. This failed attempt showed that governing water through market rule actually requires a precise calculating, measuring, and quantifying of the benefit that certain infrastructures brought to individual households. When the risk and threat brought by floods are unable to be calculated, and individualised down to certain people, this unquantifiability of service soon transforms into the inexploitability of bad water governance. In other words, since the infrastructures for flood control cannot pay for themselves, they were deemed unprofitable, and were left in the hands of local government, rather than being engaged in urban capital circulation. A similar situation also occurred in the unfolding of urban sewerage systems. Though ecological modernisation, which further integrated environmentalism and market mechanisms (Mol and Sonnenfeld, 2000), was introduced to Taiwan in the late 1980s, and the government tried to levy for the domestic sewer treatment fee, many people were resistant to this idea. They complained that they were being punished for channelling their household sewer to the sewerage system while those people who did not connect to the sewerage system and directly released sewage to the river dodged the levying of sewerage treatment fees. Therefore, these infrastructures of bad water were all considered inexploitable to the government bureau, and treated as a huge financial burden to the local government.

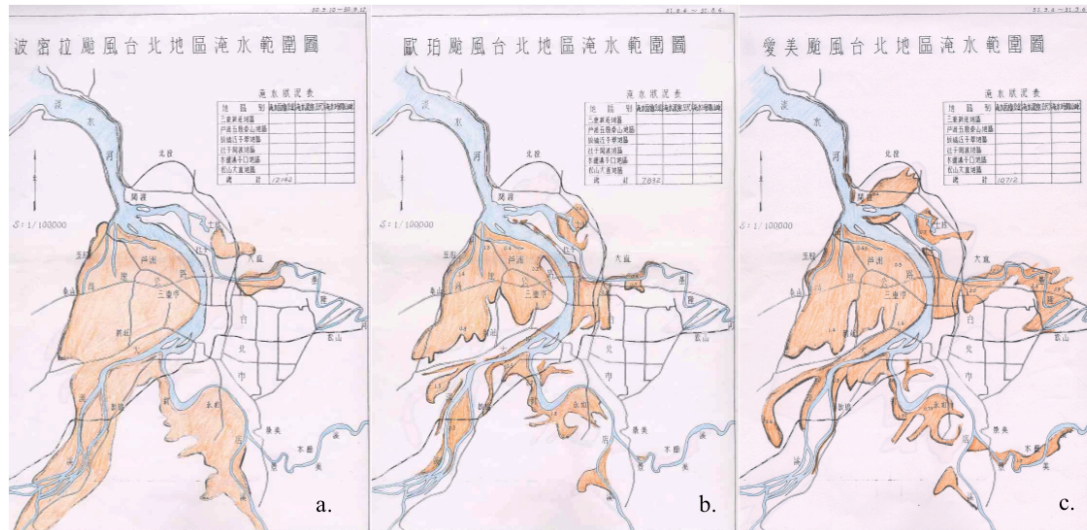


Figure 7-4 Taipei's changing flood pattern.

Figure (a) shows the flood pattern of Typhoon Pamela in 1961; (b) shows the flood pattern of Typhoon Opal in 1962; and (c) shows the flood pattern of Typhoon Amyin 1962. It indicates that the new dykes built in 1961, not only did not protect the west bank from floods, but they also increased the flood damages to the East Bank. The blue areas are the river channels, the orange areas are the flooded areas.

Source: Central Weather Bureau

Another challenge that modern water governance faced was the escalation of extreme weather events. Though unfolding at a slow pace, the Taipei Flood Prevention Plan was carried out gradually alongside Taipei's urban development since the 1960s. With huge amounts of time and money invested in flood prevention, the dykes, water pumping stations, and drainage system were built to protect Taipei against 200-year floods. However, the escalating of hazardous floods and the shortening of their intervals reduced the sense of security around the city's water governance, endangering the security of the city (see Table 7-1).

Year	Typhoon	Death (incl. missing)	Injured	Economical loss	Maximum Precipitation
1996	Herb	73	463	199 billion	1,095 mm/day in A-li Mountain
2000	Xangsan	89	65	35 billion	1,054 mm in total in Yu-li, Hua-lien
2001	Toraji	214	189	47 billion	574 mm/day in Nan-tou
2001	Nari	102	208	21 billion	425 mm/day in Taipei
2004	Mindulle	36	16	51 billion	2,000 in total in Xi-nan, Kao-hsiung
2005	Haitang	15		77 billion	2,342 mm in total in Wei-liao Mountain, Ping-tung
2007	Krosa	19	34	76 billion	approximately 1,000 mm in total in Jian-shi and Wu-feng, Hsin-chu
2008	Jangmi	5	61	64 billion	1,124 mm in total in Tai-ping Mountain, Yi-lan
2009	Morakot	160	490	141 billion	2,855 mm in total in A-li Mountain, 2,686 mm in total in Wei-liao

Table 7-1 Major Floods in the last 20 years.

Source: United Daily News

In a talk on the increasing concerns about Taiwan's extreme weather, the former Deputy Mayor of Taipei County, Lee Hong-Yuan, pointed out the inadequacy of previous water governance:

*'Hydrologically speaking, Typhoon Morakot is a two-thousand-year event, Typhoon Herb is an one-thousand-year event, Typhoon Nari is a four-hundred-year event, and Typhoon Xang-Sane is a two-hundred-year event. Based on that, we honestly can't tell what a two-hundred-year event means now. You might think what happened to Kao-Hsiung (Referring Typhoon Morakot) is a tragedy, but no one can be sure if it would happen again next month. Statistics have lost their credibility [in flood defence] now. [...] The Taipei Flood Prevention*

*Scheme was the pride of ours in the past. We spent 250,000 million NTD on it. There was no other country ever spent that amount of money to protect a city except for what Japan did for Tokyo. Nonetheless, I found we were completely wrong when I attend the Third World Water Forum in 2003 on the government's behaviour. I found we were terribly wrong for depending entirely on the dams and dykes. Just like what happened in the case of typhoon Nari [in 2001], once the rainfall exceeded the capacity we designed the city for, the city would soak in water immediately' (Lee, public speech in National Taiwan University, 21-09-2010).*

For Lee, the repeat of catastrophic weather events has seriously challenged risk management methods adopted in Taipei. Taiwan's flood risk management was introduced from the Western ecological modernisation model via international co-operation with Western countries. By utilising cost-benefit analysis, risk analysis and many other measures, the risk of environmental hazard could hence be calculated and managed with more efficiency, minimising the economical impact that floods may bring to the city (Hajer, 1997). Having said that, the application of market rule on water governance never appeared in the form of transition from the public water system to the private water companies, as they did in England and Wales (Bakker, 2004); instead, it was the birth of a more efficient, more flexible management that was invented to dodge the supervision of people's representatives (Tsai, 2001). That being said, the unpredictable force that water reveals through the repetition of environmental hazards did shake people's beliefs in the previous forms of flood risk management, as the Yorkshire drought of 1995 did for the water privatisation in

England and Wales (Bakker, 2004). What distinguishes the water event in Taipei from the one in England and Wales is that the escalating floods initiated a new opportunity for the further integration of an economic rationale and an urban water governance, instead of the rise of public-private partnerships.

Since the hydrology of the city shows a significant change, the hydraulic models based on previous experiences is no longer considered so relevant for future weather events. Lacking confidence in the existing flood control methods, and short of money to build the waterworks that can stand the extreme floods, Lee decided to gain further control over the floods by learning from the Dutch 'Room for the River' project. Instead of controlling it through water infrastructures, he decided to tackle the flood issue through introducing water-oriented urban planning:

*'The key now is the urban planning. Water governance is not just about building drainage systems and sewerage systems. It is the planning of the city should take water governance and climate change into consideration. This is what we are facing now. We can't just plan the city for today, we have to plan for the future. Now that the hydrological system is changing, we can't control the water according to data from the past. We have to think ahead, for what we do will affect our future. Twenty years from now, we will find ourselves dealing with a world we are unfamiliar with, especially in hydraulic engineering. Our knowledge of hydraulic engineering now is fundamentally different from what we had in the past. One of the World Bank's reports states Taiwan as the most dangerous place on Earth. If we can't escape from the hazards, we have to learn to co-exist with them. To live with natural disasters, we have to adapt our ways*

*of living. But I am sorry to say, our policies and people haven't quite kept up with the idea' (Lee, public speech at National Taiwan University, 21-09-2010).*

To Lee, securing the city from hazard floods is not just about constructing more water works anymore. Instead, a more comprehensive government approach, drawing on new ideas in architectural regulations, deploying a firm hand in enforcing laws in urban land use, and more co-ordination between urban planning and hydrological knowledge must be proposed when responding to escalating disasters. Based on that, the 'River County' project in 2005 was developed in order to tackle the water issue in Taipei County. The key feature of Lee's water management was largely indebted to the Dutch 'Room for the River' project. The basic idea of Room for the River was to widen the river channel, clearing the current residential or industrial use of the riverbank, so the water capacity of the river channel could be increased. By gaining further control of the waterfront spaces, the riverbank was expected to contain the water in flood events, giving new order to the water body, rather than letting it flow without any order. With water claiming the riverfront back, a new urban public space was opened-up. Since these places were dry for most of the year, and would only be taken over by water for a few days in flood seasons, the emerging space would draw great attention to the waterfront.

### *7.2.3. Re-assembling the Waterfront*

With the riverbank opened up, constructed wetlands, shrubs, sports fields and bike lanes were built on the waterfront. Such a combination of waterfront facilities was neither coincidental nor government-planned, but actually a process of long

negotiation between local governments, people, and the water. In fact, back in the 80s and 90s, while dykes were built under the Taipei Flood Prevention Scheme, the space claimed back from informal settlements in the riverbanks was already such a precious resource that different people fought for since it would stay dry for most days of the year. An officer of Taipei County Government explained to me the negotiating process:

*'Before we made these plans, we used to build the lands according to local people's needs as long as they were for leisure. Through time, we found that if we did not come up with certain ideas, the spaces would be the "first come, first serve" resources with no consistency between the spaces. Therefore, we made plans for Da-Han Stream and Er-Chong Waterway. Turning Er-Chong Waterway into Metropolitan Park, which can thus be enjoyed by people from San-Chong and Lu-Jou' (GWI, 27-08-2011).*

Since then, the park has been the main way for local governments to maintain the riverbank. To the county government, turning the riverbank into parks is the easiest way to keep the land under control without jeopardising the flood containing function of the river channel. Having said that, constructing the wetlands and sports fields on the waterfront was the result of a long trial and error process in which water played a significant role. Since the early 90s, Taipei County has been dedicated to improving the new riverbank space emerging from the embankment. To do so, trees, statues, fountains and many other fancy decorations were situated in the waterfront. However, after Typhoon Herb ruined billions of dollars of investment in the waterfront, the county government soon found that such delicate decorations were not resilient

enough for the floods. The impact of floods and the mud that came with them proved that the facilities were too fragile to be on the riverbank. Hence the county government adjusted the planning accordingly to survive more floods to come (United Evening News, 01-10-2001). Trees, fountains and statues were replaced by shrubs, sports fields and bike lanes, so that they could be easily recovered by fire tankers after flood strikes. In the light of previous experiences, Lee widely applied wetlands to the riverbank as buffers for floods, and also as the part of the on-site treatment for urban sewage (see Figure 7-5).



Figure 7-5 Xin-Hai Wetland.

Source: Taipei City Government website

The pollution of Tam-Sui River is a longstanding ailment of Taipei County. Since the non-application of the user-pays principle in the 60s, the construction of a sewerage system unfolded at a slow pace. Therefore, the River County project aims not only to control the floods, but also to reduce the river's pollution. Since the wetlands have the



ability to slow down the river flow, trap pollutants and decompose organisms in the water, the county government used these wetlands to treat part of the untreated urban sewage. Inspired by new ideas from ecological engineering, the county government also applied gravel contact oxidation processing to the riverbank as a more compact on-site treatment for narrower spaces. As another public servant told me in the interview:

*'The next step is unfolding constructed wetlands and gravel contact oxidation process. [...] We built a lot of water works to intercept and treat the sewer. As for the un-treated sewer, we constructed some wetlands in the riverbanks, so the sewer would run through the wetlands before it reaches downward. The plants and other creatures would eat the pollutants. [...] The entire sewer should be treated. As you can see in my report, we connected the sewerage system, we built on-site treatment [referring wetlands and the gravel contact oxidation process], and we also intercepted and treated the sewage. The amount of sewage that can be treated by on-site treatments was roughly only three hundred thousand tons, which is merely a fraction of the 26 hundred thousand tons that Taipei creates per day. Therefore, it was more about to demonstrate the alternative ways to treat sewerage' (GW2, 26-09-2012).*

To the county government, constructing wetlands and gravel contact oxidation processing to the riverbank was a statement of a more thorough control over urban water, in terms of its movement, water quality, and appearance (see Figure 7-6). Through introducing new ideas in flood management and ecological engineering, not only were the threats of urban security and sanitation under control, but these new

methods also channelled the urban bad water of Taipei back into the capital circulation of the county.



Figure 7-6 Chiang-Tsui Park with gravel contact oxidation process.

Source: iWater New Taipei website

### **7.3. Water as New Urban Enterprise**

In the past, waterworks (e.g. dams, dykes, waterways, sewerage treatment plants) were considered a burden on the urban annual budget since they tend to be expensive, unattractive in appearance and in some cases, smelly. Since they were mostly constructed with concrete and iron, the industrial sense of the waterworks made them unpopular among people (see Figure 7-7, Figure 7-8). With constructed wetlands and gravel contact oxidation processing being applied as an alternative sewage treatment, the old industrial landscape was replaced by green public areas, which not only made

them popular, but also created a new margin for the county.



Figure 7-7 Ba-Li Sewerage Treatment Plant.

Source: EPA website.



Figure 7-8 Wu-Lai Sewerage Treatment Plant.

Source: EPA website.

Interviewee GW2 explained to me how the new appearance of water treatments transformed attitudes toward their construction:

*‘People in Taiwan generally don’t like sewer [treatment works], due to NIMBY-ism. People would get upset if we told them we want to build one [in their neighbourhood]. However, if we told them we wish to apply gravel contact oxidation process underground, leaving parks on the surface, people would be more likely to accept it, since most people like parks. You can see there are*

*plenty of people enjoying themselves in the parks, they are not against that'*  
(GW2, 26-09-2012).

As the on-site treatments largely reduced the county government's effort to attain consent from local people, they also provided new opportunities for the city's development of tourism and real estate. Since the Xin-Dian Stream, the up stream of Tan-sui River, has always been a famous tourist spot, the County Government planned the riverbank accordingly, making the scenic water a part of the attraction without jeopardising its function to contain water:

*'The Public Work Department is also collaborating with us, they are building lights on the bridges, like the light show of Victoria Harbour in Hong Kong. The Water Management Department hopes to turn the undesirable waterfront into a delightful place, letting people be willing to close to the waterfront. [...] We built the riverbank as a tourist spot. We did the construction, and the Tourist Department was responsible for running it. [...] These spaces were shabby, but we turned them into aesthetic places. Since they were still riverbank, we put the consideration of flood defense into the project, so they would survive the floods. [...] We also held events from time to time. The waterfront movie festival, firework festival etc., they all attracted many people to attend. Over 100,000 people attended the festivals in 2007, they were also attracted by the construction in the waterfront. The best thing about Bi-tan is that there is a MRT station there. So it is convenient for people to visit there. We also built Sunshine Sport Park. Where it is located was once occupied by illegal factories. After we demolished them, we planned the land as a park. We built bike lanes, car parks,*

*an artificial fountain, a roller skating area, and a beach volley court. We managed to put some dinner vans there. We even built some award-winning toilets there, so the bike riders won't lose their bikes while using the toilet' (GWI, 27-08-2011).*

Besides tourism, the county government also planned to regenerate the waterfront area of the county. Now that the green public spaces have created a huge urban greenbelt along the water, the county government decided to exploit its beauty by generating real-estate development along the river, as stated in the Water Resource Bureau's annual report:

*'By introducing the integrated water management, we engage the making of urban landscape and river renovation. Together they turn into the engine of urban development, generating the economic development of the area. We used to turn our back to the river, now we turn back again, facing the water we live by' (2009-2010 Annual Report, Water Resource Bureau, Taipei County).*

With the new margin of real-estate development emerging, Taipei County thus was able to re-identify itself as the real-estate provider for the middle class in the whole Taipei metropolitan area. The county elevation proposal released in 2009 clearly stated that waterfront regeneration was the urban strategy of Taipei County:

*'[We] hope to enhance our competitiveness, attracting high-end labour force to move to New Taipei City, making a clean, beautiful 'liveable city'. So far, only 1/6 of the lands have been developed. We will develop the lands left in the city with great awareness of environmentalism, creating a nice environment to live. [...]* Nice environment means clean, natural spaces. The Tam-Sui River

*Renovation Project has made the river its cleanest in 30 years. We will continue the renovation, turning Chung-Kang drainage channel and Bi-Tan the recreational places for people's leisure time. We will make Er-Chung Waterway the biggest waterfront park in the world, making New Taipei City a better place to live. [...] These are the keys for making a 'liveable city', so that people would like here, and thus move here' (Taipei County's Elevation Proposal, 2009).*

On that account, the urban bad water was to be re-engaged in capital circulation as a part of urban economic development. By raising public investment in rehabilitating the river, the living quality of the waterfront was thus enhanced along with the emergence of the gigantic waterfront greenbelt. Together with the waterfront regeneration, the urban bad water of Taipei County has become the prop for stimulating the local economy, generating more revenue for the county government. The once loathed urban bad water has been transformed from a financial burden into the new growth engine, the new urban enterprise of Taipei County.

#### **7.4. Conclusion**

The flood control and sewerage system in Taipei's urbanising process have been taken as unprofitable and hence cannot be properly managed via application of market rules in their construction. Given that the benefit of their construction is difficult to quantify, and certainly cannot be individualised, they were usually considered a financial burden to the state, a luxury that should be carried out at a slow pace. However, with the application of new water knowledge and new ideas of water control, the industrial appearance of the waterworks and waterfronts have become

more appealing and more approachable for people to visit in their leisure time. The waterfront renovation project thus, like many other urban regeneration projects (Bunce, 2009, Quastel, 2009, Cohen and Bakker, 2014), became an urban strategy for enhancing competitiveness in the global urban competition. Via this reinvention of bad water governance, urban bad water, which once was loathed and shunned compared to the precious commodity of domesticated clear water, was finally able to be governed through economic logic, taken as a part of urban development. In other words, with the newly introduced knowledge and method of water management, governing the urban bad water was able to be re-learned as for a means to the city's regeneration, which I characterise as 'hydrological gentrification'. Inspired by Dooling (2009)'s notion of ecological gentrification, which '*problematizes conventional planning approaches to using public green spaces as tools facilitating social reform and public health objectives, and as tools promoting economic development for the benefit of private-property owners* (p. 631)', the idea of hydrological gentrification contributes to the re-territorialisation of urban bad water and the city in two senses. First, regarding urban economic development, the new ideas in bad water management re-engaged with the neo-liberal logic of urban regeneration. For the local government, the waterfront rehabilitation is not only able to increase the land value of the waterfront area, stimulating the growth in urban real-estate development, it also could attract the new urban middle-class migrants, who seek a desirable living environment along with accessible commuting distances from the white-collar jobs in the city centre. Both these outcomes of urban bad water governance could increase the tax base of local governments, and boost the local

economy. Therefore, hydrological gentrification here serves as a way to understand how urban bad water was incorporated into urban economic development. The second insight hydrological gentrification draws on is an ideological one, which stressing the way hydrological knowledge, methods, and rationales are being conceptualised as new urban planning orders. Through the introduction of new engineering technologies, the constructed wetlands, and the gravel contact oxidation process, Taipei's waterfront was transformed from a dangerous, polluted industrial landscape to a green, welcoming public space for people to enjoy as an urban scenic spot. The new water order entwines concerns for urban security, sanitation, and urban entrepreneurship, providing a technical solution for bad water governance. However, this new water order also became the new gentrifier of the waterfront areas. For the urban squatters who used to dwell on the watershed and by the channel, it was exactly the threat of flood, the stink of sewer, and the lack of economic potential sparing the waterfront areas from other possible uses, putting these spaces off the hook of further development. While the newly established water order re-engaging the economic value and the bad water management, it at the same time strips the waterfront area of the shield against capital's negligence, exposing the squatters to threats from being displaced. In this sense, the urban waterfront renovation should be understood as the re-assembling process of urban water, the city, and the neoliberal logic of urban entrepreneurialism. By taking it as a re-assembling process, not only we can witness the human conception of urban water being changed through the knowledge transfer and the exhibiting of natural forces, but also we can see the urban landscape being reshaped by different orchestrations of urban water, infrastructure, human habitation,



and capital circulation.

Assemblage thinking therefore contributes to an examination of the co-functioning of urban water, capital, neoliberal ideology, new engineering methods, and the historical contingencies of international politics in a process-led manner. Through the delineation of Taipei's urban water governance, all urban entities, including international co-operation under the Cold War framework, the policy transferring process, the disastrous flood events, and people's dwelling on the waterfront, can thus all present their capacity, their force, on the forming of the city. Taipei's waterfront renovation, in this sense, is no longer considered as being the consequences of certain dominant forces driven by an economic rationale. Though the neoliberal forces like urban entrepreneurialism and market-mechanisms did shape Taipei's waterscape through relating urban water to urban regeneration and the user-pays principle, this engagement process is in fact facilitated by other constituents. For instance, Taipei's waterfront would not be prettified without the introduction of new engineering methods. It is the learning of ideas like constructed wetlands, gravel contact oxidation processing, and 'Room for the River' that makes water infrastructures aesthetically desirable, making the waterfront regeneration possible. Furthermore, this transferring of urban policy and the learning of water knowledge would not be legitimised and carried out without the increasing challenge of floods. Taipei's waterfront was thus formed by the co-evolving process of the urban forces of capital, humanity, and water. While the urban water keeps revealing its power through the serially disastrous flood events, humans have accordingly made relentless efforts to gain control over the water through producing new knowledge, and in so doing new possibilities of

incorporating urban bad water into capital circulation have emerged, and the urban water assemblage of Taipei has thus been able to be re-assembled. Assemblage thinking here offers a processual perspective on the negotiation between the concerns of urban water and the neoliberal logic of urban development. By delineating the interaction between urban water and neoliberal urbanism, the different forms of their entanglement under different circumstances can thus be captured. As Kaika's (2005) analysis of Greece's tap water system shows, the modernisation of urban water actually paved the way for the subsequent neoliberalisation of water. Since Taiwan's urban water governance was grounded in the Western model of modern water governance through international co-operation, it was under the constant guidance and embrace of neoliberal urban governance. Through the re-assembling processing of urban bad water, neoliberal ideology, and urban policy transfer, Taipei's waterfront renovation re-engages itself with the neoliberal logic of urban entrepreneurialism, and urban bad water was henceforth turned into the new generator of Taipei's economic development.

## **8. Urban Informality and Hydrological Gentrification**

In the last chapter, I demonstrated how Taipei's bad water re-engaged with the neoliberal economic rationale, and became the city's new generator in its economic development. With the new ideas introduced in urban water governance in Taipei, a different order of scientific rationale was carried out in the management of the urban waterfront. In the River County scheme, the lands along the river areas were reclaimed by the County Government as flood zones, which should be emptied for the rainy seasons to lessen the damage that floods might cause to people. Though aiming to secure the people from floods, the retrieving of the land would unavoidably encounter the urban informality of Taipei County, endangering the dwellers by exposing them to the threat of displacement. To legitimise the whole project, new hydrological orders had to negotiate their way into the existing dwelling relation between waterfront and its inhabitants. Given that informal settlements had existed in Taiwan ever since the very beginning of urbanisation, Taiwan's urban informality has become a flexible urban governing measure to cope with the evolving relation between informal buildings and urban planning. Re-planning waterfronts according to hydrological orders is not merely a change of land use, but the transformation of human-water relations. With the new ideas of water governance introduced, the previous flexible, or even ambiguous form of human-water interaction were replaced by the scientific, rational plan which addressed the absolute safety of people and optimised arrangement of the waterfronts. This chapter aims to delineate the ideological encounter between urban informality and the new hydrological order in

the River County project.

Taipei's urban informality is deeply embedded in the everyday lives of ordinary people. Its traits could be found in street vendors, informal houses, attached tin rooftops, barred windows, and extended patios or back yards. Such phenomena exist not just as part of the lives of urban poor, but also rather as a shared experience of almost each social class. In the words of a bureaucrat, who was from Water Resources Bureau of Taipei County Government and has a lot experiences in negotiating with squatters from river renovation projects, that we interviewed: '*The question should not be cast as "Who live in informal houses?", instead, it should be rephrased as "Who doesn't have informal parts in their houses?"*' (Interviewee GW2). Therefore, Taipei's informality is not merely an issue of poverty or modernisation, but rather a part of the collective daily experience of the people's interacting with government regulation, market rule, and materiality through the urbanisation of Taipei Metropolitan. In short, Taipei's informality is actually its way of life.

As elaborated in chapter three, urban informality is a general term that can be used in many different circumstances: as a spatial categorisation, an organisation form, a governmental tool, and the negotiability of value (McFarlane and Waibel, 2012, Roy and AlSayyad, 2004, Bunnell and Harris, 2012, Dovey, 2012). This chapter investigates urban informality beyond its appearance as rustic buildings, unmethodical uses of lands, or even unauthorised legal status. As McFarlane (2012) has argued, the formal-informal distinction in the recent debates was re-understood as forms of practice that '*co-constitute and dissolve spaces, becoming politicised or depoliticised at different moments, and they both enable and restrict urban life*' (p. 105). In other

words, this focus of urban informality could provide an opportunity to further scrutinise how formality-informality participates in the formation of a city, whilst also being shaped by the forces of urban development. Such a view on urbanisation could be discussed to a greater extent within the current debate on seeing the city as an assemblage. In his other research, McFarlane (2011b) adopts assemblage to perceive the complex interaction between urban constituents through the dwelling process. To McFarlane, apprehending the urban with assemblage thinking is to see the urban as an intertwining process involving different constituents, and to examine the process through which these heterogeneous constituents were being territorialised, de-territorialised, or re-territorialised in specific moments. This chapter further applies assemblage thinking to the discussion of urban informality. By revisiting the pivotal moments in the forming of Taipei's urban informality through its urbanisation, this paper draws more attention to the assembling process of things: the state regulation, the local people, the historical events, the capital circulation, urban materiality and so forth; we are thus able to find how informality evolved through time under different circumstances, and how these transformations shape and are shaped by the city. This chapter begins with the introduction of Taiwan's urban informality. By employing assemblage theory, urban informality can be understood as a flexible management of land use that was tacitly permitted by local governments as an unrecognised part of an urban housing solution during Taiwan's urbanisation. In the second part, I am going to scrutinise how the existing dwelling relation between waterfront areas and their inhabitants was challenged by the emergence of a new ideology of water management. In the final part, I will further elaborate on the idea of

hydrological gentrification, to give a clear view of the processes through which the scientific, hydrological order was assumed to be the rational order for the land use of waterfront, leading to the disarrangement of urban informality.

## **8.1. Assembling Taiwan's Urban Informality**

To see how Taiwan's urban informality mutates through its assembling process, in this section we will spotlight five key moments of (re)territorialisation/deterritorialisation: the encountering of clientalism, modernisation, materiality, populism, and urban entrepreneurialism in the course of Taipei's urbanisation. By revisiting these moments, we could thus not only get to see the features of urban informality, but also get to peek at the way it was formed and evolved through the assembling process, and how it shapes the landscape of the city.

### *8.1.1. Informality as the State of Exception*

Urban informality first appeared extensively in Taiwan in the 1950s, the dawn of Taipei's urbanisation. After defeat in the Chinese Civil War in 1949, the KMT regime led by Chiang Kai-Shek fled to Taiwan with over 1.2 million mainland migrants (also known as *mainlanders*). Many of these mainlanders settled down in the capital Taipei City, thus the population increased from around 270,000 to 500,000 in 1949 (Chen, 2010). The sudden increase of population created a strong demand for housing. The demand was so strong that, although the KMT regime was in possession of many houses after the Japanese Colonisers left in 1945, the number of these houses was still

far from enough. To deal with this situation, in the early 50s the First Lady Soong May-Ling raised funds for building public veteran houses, which were mostly located on public land such as reserved park land or the lands own by state-owned enterprises. Though the use of lands did not conform to what they were supposed to, the KMT regime had to go with much expediency. That being the case, the number of public veteran houses was nowhere near sufficient<sup>10</sup>. Given that the accommodation provided by the government was extremely rare, only the soldiers who came with families, or those with higher status, were allocated lodgings. For those who were not soldiers, or were dismissed from the army due to the downsizing required by the US Government, they had to ‘sort themselves out’<sup>11</sup>. Under the circumstances, these mainlanders ended up living in unwanted lands like graveyards, flood plains, so as to put a roof over themselves (see Figure 8-1).

---

<sup>10</sup> According to the archive from National Science Council, the total count of listed public veteran communities in Taiwan is 886 communities, containing roughly 100,000 households in them. Comparing with over one million mainlanders migrated to Taiwan, there was a huge insufficient in amount.

<sup>11</sup> After Korean War, US funded Taiwanese Government by US Aid. However, it came with one string attached: In order to avoid further warfare, KMT regime were demanded to downsize its army. Many soldiers were discharged with hardly any pension fund at that time.



Figure 8-1 Old veterans with their informal veteran houses.

Source: re-photographed from the Liu-Gong Photo Gala

Barely recovered from the war, the regime was extremely short on budgets for housing provision. In order to maintain its power, the most convenient way to deal with these informal settlements would be to tacitly permit it. That way the KMT would not have to spend a fortune on housing schemes, whilst avoiding the possible turmoil once the people could not afford to sustain their basic lives. In an interview I conducted in an informal settlement built in the 1950s, interviewee L1 told us that she and her husband moved to the flood plain along Liu-Gong Channel simply because her husband was working in the army camp nearby, but the public veteran house they were assigned was too far away:

*‘At the time, we both had to work to provide for our family. If we live apart, who will help me with our kids? [...] When my husband went to the camp, he would take the children with him, asking his colleagues or other soldiers to look after them when he is busy. His superior did know this matter, but he turned a blind eye on it’. As she further went on: ‘When we moved here, we had to dig the earth*



*from the higher ground to fill the lower ground in order to make enough room for our house. While we were digging, Chiang Ching-Kuo<sup>12</sup> once came here, commanded the soldiers to transport the rock for our construction by their trucks. Ergo, whenever I attend the government meeting, I always tell them it was Chiang Ching-Kuo who permitted us to build the house' (Interviewee L1).*

In this sense, this form of urban informal settlement is what Davies (2006) characterised as the housing process aiming to optimise the housing cost, journey to work, assistance from the peers, and most importantly the sense of belonging, and in Taiwan's case, the sense of security provided by the squatters' patron-client relationship with the KMT regime. In a patron-client relationship, a patron - who is usually a regime - creates a reciprocal relation with its clients by granting them favours. In return for this favour, the clients support the patron with goods or loyalty (Hall, 1974). Given that marshall law was declared at that time, the authoritarian power of KMT regime was unquestionable, and so it was able to shelter informal settlements regardless of their legal status. As a defeated sovereign, KMT had every reason to maintain its popularity among its supporters in order to sustain its power. Since the informal settlements played a crucial role in absorbing the homeless mainlanders, the regime had to turn its eyes away. Therefore, informal settlements were permitted as a favour of the KMT, which is the patron in this patron-client relation. In exchange for silence on the matter, the mainland squatter clients supported the KMT regime with uncompromising loyalty to it (Li, 1996). Under the

---

<sup>12</sup> Chiang Ching-Kuo was the son of Generalissimo Chiang Kai-Shek, he succeeded Chiang Kai-Shek's power after he died in 1975, and was reelected as President in 1978.

circumstances, informal settlements were a common scene at that time. According to a government report published in 1964, one-third of the Taipei citizens lived in informal settlements (Chen, 2010). In that case, Taipei's informality is far beyond being just the spatial category that accumulated with urban unfortunates, an unauthorised organisational form, or the governmental tool for alleviating the housing shortage. As McFarlane and Waibel (2012)'s delineation on India, it is also a negotiable value since it is the urban idiom, the local knowledge, through which people negotiated with the urban regulation, institution, and with sovereign power (Alsayyad and Roy, 2006, Roy, 2009c). Such negotiable value can be best exhibited through the patron-client relationship between the KMT regime and the squatters. For instance, when the KMT regime tried to relocate the informal settlements on Er-Mei parkland in 1958, the occupants, with the backing of city councillors, pleaded with the Taipei City Government to postponing the relocation date. While pleading, they held the banners that said '*All hail Republic of China!*' '*All hail President Chiang!*' '*We will demolish these houses after we reclaim Mainland China!*' (United Daily News, 13-03-1958). Considering the authoritarian background at that time, this kind of plea actually served as a gentle reminder of their patron-client relationship with the KMT regime. Even after informal settlements started being taken down when the urban plan was launched, pointing out such a patron-client relationship was the major way to further negotiate with the KMT regime. This interdependent relation can also be found in many other veteran neighbourhoods, such as the informal settlements in the reserved parkland No. 14, 15 (see Figure 8-2). When the US broke diplomatic relations with Taiwan in 1979, Taiwan was diplomatically isolated. In response to the

threats from Mainland China, the KMT regime raised funds from people to enhance national defence. Among all the neighbourhoods in Taipei City, the squatters in reserved parkland No. 14, 15 donated the highest amount of money in the neighbourhood. One of these homemakers donated all of his bank deposit regardless of other people's counsel. He said: *'What I shall keep this money for? Only if we have the force to defend the country, then we could have our individual lives'* (Huang, 1997). With the significant political preference of these urban squatters, keeping these informal settlements was actually to the KMT's advantage.



Figure 8-2 Informal settlements in reserved parkland No. 14, 15.

Source: CNA News

Though these informal settlements were tolerated, they remained illegal under the Building Act that was enacted in 1938, when the KMT regime was still in Mainland China. This act clearly announced that *'Without review made by and the building permit issued by the municipal or county (city) (bureau) competent authority of*

*construction, anyone may not construct, use or demolition any building, [...]*<sup>13</sup>.

Therefore, although the existence of informal settlements was evidently illegal, the government would not enforce the law. This deliberate ignorance of the violation of the law was enacted under an unspoken mutual agreement between the KMT regime and mainlanders. This consent was deemed a favour; in exchange for this favour, these mainlanders supported the KMT regime resolutely (Li, 1996). In other words, this kind of neglect of urban squatting is actually a part of the regime's political strategy. These self-made communities under the state's tacit permission compensated for the state's inability to provide social welfare, and ultimately helped to sustain the regime's legitimacy. With the enforcing of the national census and the refining of associated regulations in late 1950s, the residents of these informal settlements gradually gained their access to tap water, electricity, house numbers and were even obligated to pay house tax. This negotiating process of regulation with regard to informal settlements set the tune of Taiwan's informality. Though the laws were made, it was the sovereignty, the KMT regime, to decide whether to execute the regulations or not: this decision was determined completely according to the need for the KMT regime to sustain its power.

#### *8.1.2. Institutionalised Informality —The Legal-illegal Continuum*

The unwritten rules for informal settlements may serve the sovereign well, as a quick

---

<sup>13</sup>For more, please see the Laws and Regulations Database of The Republic of China.

<http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=D0070109>

fix for the lack of housing policy; however, to get further control over the informal settlements, the sovereign still needs to obtain its juridical power over them. In Taiwan's case, the regulation for informal settlements was first set into words in 1958 to serve the needs for modernisation at that period. Since a new urban plan for the Taipei area was made with the assistance from the US Advisor Group to ensure Taipei's urban development. To deliver the modern, rational urban plan introduced by the US, a more absolute control over public lands must be gained. According to the Managements of Illegal Constructions<sup>14</sup> released by the Ministry of the Interior in 1957, any new construction that violated the Building Act would be stopped or demolished if needed. The local governments also got to relocate any existing informal settlements, as long as they were considered to be violating urban planning, threatening public safety, or hindering public traffic and sanity. This new rule granted the governing authority the juridical power over its informal settlements. Since the local government made the regulations regarding safety, traffic, sanity and urban planning, the fate of informal settlements was thus decided entirely by the local governments.

The informal settlements were further problematised after Taiwan's Urban Planning Law<sup>15</sup> was enacted in 1964 with assistance from the US. The consultants from the US expected to build the nation's economic development through stimulating Taiwan's housing market. Simultaneously, Taiwan also got a loan from the United Nations'

---

<sup>14</sup>For the detail of the regulations, please see the Laws and Regulations Database of The Republic of China. <http://law.moj.gov.tw/LawClass/LawAll.aspx?PCode=D0070124>

<sup>15</sup>For the detail of the regulations, please see the Laws and Regulations Database of The Republic of China. <http://law.moj.gov.tw/Eng/LawClass/LawAll.aspx?PCode=D0070001>

‘Expanded Program of Technical Assistance’<sup>16</sup>, which was launched for improving economic development in developing countries. In this program, the emerging urban problems were a significant part of the issues to be addressed. In 1966, Taiwan's government formed the ‘Urban and Housing Development Committee’ to work with experts from the UN, including Donald Monson and other experts specialising in urban and other related issues. Together they amended Taipei metropolitan’s urban plan, provided training for local urban planning professionals, and restructured the associated organisations (Chen, 2011). These Western-influenced experts established a regime for urban planning in Taiwan. According to Chen’s research, the ethos of Taiwan’s urban planning in the period was actually based on the UN’s ‘The First Development Decade’, which aimed to engage third world countries with Anglo-Saxon economic growth. In this sense, the newly proposed public housing policy, which is meant to encourage people to own their private property, could be understood not only as accommodating to the squatters, but also initiated a potential stimulus for the city’s real-estate development.

The new regulations for dealing with the existing informal settlements granted these households some rights with regard to their properties. That is to say, the public sector could not relocate them without sufficient reason. Even if these households were to be relocated, an appropriate plan for compensating or accommodating would be necessary—just like the relocation plan for ‘formal’ households. On that account, the formal-informal relation can no longer be distinguished by legal status, rather, there is

---

<sup>16</sup> ‘Expanded Program of Technical Assistance’ was integrated into ‘United Nations Development Program’ (UNDP) in 1966.

a legal continuum existing within urban informality. In other words, some of the informal settlements (e.g. the ones built before 1957) would enjoy the similar legal protection to the formal houses. They were spared from the immediate threat of demolition, by having partial access to the public infrastructures. Though the use of rights the informal houses were acknowledged, but this does not mean they were actually formalised. Since the government still intended to reclaim these public lands one day, the trades of informal settlements were limited, and the market value of these informal settlements were underestimated intentionally, so the government could hopefully ‘buy them out’ with a low price once needed. Therefore, formality and informality could not be identified solely through its legal status; instead, they should be broken down into each individual moment that is situated separately in the legal-illegal continuum. This illegality of the informality, as Asher Ghertner (2008) has argued, was driven by class-interest, and was constituted by the urban elite (e.g. planning professionals, government officials) by introducing a cleaner, prettier urban image from the West. And the urban informality itself in this sense could be seen as a governmental tool that the government adopts to ‘*allow particular domains and forms of intervention*’ (McFarlane 2012, p. 91).

#### 8.1.3. *Urban Informality as the New Urban Common Sense*

Though emerging as the hallmark of the urban poor, urban informality soon took the city by storm, and became a common phenomenon in Taipei. With the city’s urbanisation in the late 1960s, the urban spaces became even more precious than ever. This is when condominiums became popular in Taipei. This form of congregated

building provided convenient and affordable housing to the new urban migrants, facilitating Taipei's further urban development. Having said that, the emergence of this new form of building not only meant the increasing of housing supply, it also meant the birth of a new style of living. The residents of these flats had to learn to adjust their ways of living to these condominiums, at the same time adjusting these flats to suit their old living style. For example, as a subtropical island, people in Taiwan were very used to airing their clothes in their yards. Once moving into flats, they had to air their clothes on small patios. Another example was the new living style in flats provided a weaker sense of community than in traditional houses. That is to say, people who move into a flat usually find themselves vulnerable to crimes like burglary, and this would create a sense of insecurity in their lives. Therefore, soon after the new building material—light gang steel—was introduced to Taiwan in the 70s, people started to use it for amending their living conditions. The popularisation of iron and steel materials in Taiwan was also a coincidence of historical geopolitics. During the period of the Vietnam War from 1959-1975, US Aid funded the Vietnam Government to import steel with a string attached-- the steel must be imported from developing countries. Taiwan in that time was the only country that was supplying iron and steel materials in East Asia, therefore the iron and steel industry grew rapidly. The iron and steel industry kept flourishing until the US changed their policy, urging Vietnam to import its steel only from the US in 1967. Another reason for the industry booming was the development of a ship recycling business in Taiwan. Due to its location and cheap labour at that time, Taiwan in the early 60s became famous for the ship recycling business(Hsieh, 2001). These two reasons made Taiwan's iron and



steel industry thrive as never before; together with the launching of a state project for developing the iron and steel industries in the 70s, iron and steel materials became cheap and accessible in the 70s, thus people started using them for the modification of their houses. For those who worried about burglary, iron-barred windows provided a sense of security; for those who needed more space for air-drying or planting, iron brackets on patios offered an additional room for drying their clothes or putting more plants out; for those who lived on the top floor, experiencing both heat in the summer and leaking in raining days, an attached steel rooftop could shield them, or even provide more living space (see Figure 8-3). Since the modifications could be achieved cheaply and quickly, this kind of informally attached part of buildings became a popular choice in urban areas (Wheater and Evans, 2009). If informal settlements first emerged as a common representation of the urban poor, at this stage it certainly has become the urban knowledge of all people in the city, the urban idiom of the Taipei area. The informal settlements and extensions were no longer the slum-like enclaves sitting in the city's corners. Rather, they had become Taipei's unexceptional urban scenery that dominated that city's appearance, the common living experiences of all citizens across the distinction between rich and poor, centre and periphery. With the premature construction techniques and the loose regulation, these unauthorised modifications existed as a local knowledge, and became the symbol of the heroic entrepreneurship of local people (De Soto, 2000), the coding of Taipei's informality assemblage. However, instead of only using this local knowledge to support themselves economically, this entrepreneurial spirit was mainly adopted as a way of building a more convenient, adjustable living style. Meanwhile, with its variety of

appearances as tin rooftops, patios, barred windows or even whole houses, it is difficult to detect, and hard to stop. Together with the loose regulation at that time, informality became the new common sense of people for coping with the urbanisation. It challenged western urban knowledge in terms of architecture and regulation through occurring as a part of people's mundane lives (AlSayyad, 2004). The huge amount of these informal buildings created an immense public opinion supporting these informal landscapes, and paved the way for this urban informality to be further institutionalised, and regularised, which will be further elaborated in the next section. This popularising of informal buildings also led to another unwanted consequence -- it inevitably jeopardised the city's construction of public infrastructures, especially the water infrastructures such as the sewerage system and the embankments. For instance, the informal extensions in the service lanes (see Figure 8-4) would block the sewerage system from connecting to the domestic plumbing system, impeding the unfolding of the sewerage system. Also, when the attached rooftops turned the roof spaces into semi-indoor spaces, or even into additional rooms, the original drainage holes that were designed to drain the rainwater ended up infused with domestic wastewater, compromising the drainage system's function of draining the floodwater.



Figure 8-3 An informally attached rooftop in Taipei County.

Source: The author.



Figure 8-4 The informal extensions in the service lane.

Source: [www.taipeilink.net](http://www.taipeilink.net)

#### *8.1.4. Populist Informality – The Democratisation of Urban Governance*

As described earlier, Taiwan's urban informality first emerged along with the authoritarian governance of the KMT regime. To adapt Taiwan's democratisation in the 80s, urban informality in Taiwan also transformed into another appearance. Now that urban informality was no longer the emergent feature of the urban poor, but a shared everyday experience of all citizens, it was considered a right that all people were entitled to. With the founding of a new opposition party, the Democratic Progressive Party (DPP), people learned to leverage the government's action on informal buildings with their ballots. Many local politicians started offering to expunge the local government's budget for demolishing informal buildings so they could win the support from their electorates. In a census KMT carried out in 1981, the KMT found that their candidates received lower support wherever the informal buildings had been demolished, so they decided to call off all the demolition plans in 1983 (Lin, 2006). This move was reckoned as the compromise of the government, and it led to two consequences. First, the ambiguous attitude misled people into thinking informal settlements or informal attachments were 'legalised'<sup>17</sup>; therefore they grew from 65,000 to 156,000 throughout the country, till regulation was tightened up once again in 1991 (Lin, 2006). Second, since the demolition of informal settlements and informal attachments became an issue on the table, whoever owned the bigger bargaining power with the authority would be tolerated with bigger informal

---

<sup>17</sup> Though informal buildings have never actually legalised, the loosening of regulation was commonly interpreted as legalising informal buildings, therefore many people their informal buildings at this time.

constructions. In other words, urban informality in this period lay in the populist political reality, instead of the patron-client relation as previously.

At the beginning of Taiwan's democratisation, many politicians learned to manipulate the populist tendency of their electorates (Hsu, 2009). Aiming to maximise his support, when Chen Shui-Bian, a DPP nominated candidate, was running for the mayor's office of Taipei City in 1994, he pledged to postpone all the demolition on small informal buildings. In his opinion, since small informal buildings that belonged to general citizens existed to meet people's actual need, they therefore should be legalised (United Evening News, 10-12-1994). As for the large informal buildings owned by the rich and powerful, since they affect the city's development to a greater extent, they should be put on the top of the demolition list. As a potent challenger to the KMT regime, Chen situated himself as the spokesperson of the citizens, advocating for the citizen's general interests. In his speech, he stated

*'Never before, we use the identity of Taipei citizen to unite us together, pleading each citizen to cherish the opportunity to be the man/woman who is able to decide the fate of the city. In the past, the importance of citizens were ignored deliberately, we had no say in the city's matter. Now, every ordinary people can change the city, together we can change our home as we want it to be' (Huang 1997).*

In his campaign, he pledged to tackle the big informal buildings first, and be more flexible on the small attachments belonging to the general citizens. He accentuated that he would not be *'Only clapping the flies, but not punching the tigers'* (United Evening News, 10-12-1994). Soon after he was elected in 1994, he put off demolition

for the informal constructions smaller than 30 square meters, and focused on tackling down the bigger informal buildings. This policy may be well intended, but it got rocky when it came to the execution. Since the money cliques all have strong bonds with local politicians from both parties, demolishing the big informal buildings was exceptionally hard. Meanwhile, when the City Government was busy negotiating over the big informal buildings, the manpower focusing on the new informal buildings fell short. As the result, the demolition rate dropped from 57 per cent to around 40 per cent (United Daily News, 4-6-1995). This setback made the City Government recast its policy. In the new policy it announced in 1995, it postponed all demolition to informal buildings that were built before 1994, while concentrating its manpower on controlling the new informal buildings. In the new order, the government set up a sequence for dealing with informal settlements: those which were built after 1995, violating urban planning, threatening public safety, or breached the public sanitation code shall be demolished first.

By prioritising the demolition of the new informal buildings, the city government thus was able to stop new informal constructions from being built. This new policy, as argued in the previous section, was also the partial formalisation of the informal buildings. However, the negotiation of the formal-informal has more of a class implication in this case. In fact, the people that benefited from this policy were mostly the middle class in the city. Since their informally attached parts would not exceed 30 square metres, and would be attached to their private properties - which means they would not stand in the way of new public infrastructures - they would almost certainly be off the hook from most demolition plans.

With the shift in regulation, the boundary of the formal-informal distinction was blurred through constant negotiation. As Roy and AlSayyad (2004) have pointed out: *‘If formality operates through the fixing of value, including the mapping of spatial value, then informality operates through the constant negotiability of value.’* (see also McFarlane and Waibel 2012, p. 5) Through adjusting the regulation, Mayor Chen won the support from the middle class, the biggest margin of the city’s electorates. As for those who would not contribute to Chen’s re-election, such as new urban migrants and the old informal settlements that still had a hint of patron-client relations with the KMT party, they were more exposed to the demolition plan.

#### *8.1.5. Neoliberal Urbanism and Informality*

At about the same period as Taiwan’s democratisation, neoliberalisation (Brenner et al., 2010, Peck et al., 2009) also transformed Taipei’s urban politics and informality significantly. In the 1990s, the power of market and civil society was introduced to Taiwan as a way to reform the authoritarian politics. With the assistance from planning professionals, Chen’s City Government came up with urban policies that emphasised urban competitiveness, advocating gentrification (Lees, 2012, Harris, 2008, Smith, 2002) of Taipei’s urban landscape as a modality of urban development. Following this new rationale, he executed the eviction plan of reserved parkland No. 14 and 15 in 1997. According to the United Daily News, when elaborating this plan, he claimed that

*‘In a wealthy city like Taipei, this [community] is the tumour of the city, the shame of citizens. It is unimaginable that right next to the world famous Regent*

*Taipei Hotel are more than a thousand people living on a graveyard. Whenever he [Mayor Chen] think of Michael Jackson used to live in the Regent Hotel, looking down to such an urban slum through the window, he feels shame' (10-11-1996, United Daily News).*

The reserved parkland No. 14 and 15 was a graveyard since Japanese Colonial times. Though being reserved as parkland, the plan was never carried out. As a result, it gradually became a community of more than 900 informal settlements, roughly 2000 squatters, accommodating mainlanders and urban migrants throughout the urbanisation in the 70s. To make the city more appealing to the investors and his middle class electorate, Chen was determined to transform the reserved parkland No. 14 and 15 into a music park after a short visit to Vienna. Inspired by the European case, he hoped to make the city more tasteful and rich in culture, enhancing the city's competitiveness. Chen publicly announced his vision for the land:

*'In the park, there will be a water fountain and a bandstand so that people can enjoy music whilst enjoying their coffee at the terrace nearby. At the Regent Hotel side of the park, we will have a stage for Taiwan's traditional performing art, so the foreign visitors can enjoy our local performance' (12-11-1996, United Daily News).*

Since mainlanders and the new migrants were never his favourite part of the electorate, he executed the eviction within a short time, without providing a proper relocation plan for the squatters. The rush of eviction led to a messy end. An old veteran hung himself right on the eviction day. Overwhelmingly criticised for his reckless decision, Chen was forced to learn other measures for dealing with the



informal settlements. That is, not only to shame the informal settlements for hindering the city's economic development, but to further incorporate the entrepreneurial thinking of urban informality into the government via the measures of community planning projects.

Learning from his bitter lesson, Chen soon adjusted his governing strategy towards the informal settlements. In the later case of Treasure Hill, which was also an informal settlements community, the Chen Administration changed its governmental strategy for informal settlements. It employed the community planning system in the re-planning of Treasure Hill. The community-planning system was introduced in Taipei in the late 1980s as a way to engage more intellectuals in the local affairs. At that time, it was introduced to Taipei under Chen's reign as the way to weaken the power of local factions, facilitating democratisation (Huang and Hsu, 2011). By the 1990s, the community planning system was widely employed as a way to empower civil society, enhancing the democratisation of Taiwan, and at the same time promoting a local Taiwanese identity against the orthodox Chinese identity espoused by the KMT regime<sup>18</sup> (Huang and Hsu, 2011). With the newly introduced bottom-up ethos, urban planning experts started building partnerships with the local community, hoping to engage grass-root communities into public affairs. In the controversy of informal settlements, community planning first existed as a critique of the City Government's oligarchic power over the informal settlements. To the new generation of urban planning experts, the existing residents are as much entitled to the urban spaces they

---

<sup>18</sup> According to Huang and Hsu's research in 2011, the introducing of community planning was also used to stabilise President Lee's power against his political rivalries within the KMT Party.

live in as any governing regime. Through the introduction of community planning, the force of local informal communities and the new generation of planning experts teamed up, and together they embraced the new localism (Brenner and Theodore, 2002b) to resist to top-down planning system of local governments. Since the succeeding Ma Administration was also committed to urban entrepreneurialism, focusing on building the tourist and cultural industry, the planning professionals and local residents learned to incorporate themselves as the city's cultural building. They argued that Treasure Hill is a historical village with a rustic, unique building style, and these qualities were exactly what was needed for building Taipei's unique character for urban competition (see Figure 8-5). By turning these informal settlements into an artistic village, not only could the local government avoid a humanitarian crisis of forced eviction, but it could also increase the city's cultural attraction to national and global talents. This way, the informal settlements that were once regarded as urban tumours were able to reincorporate themselves within the economic rationale, since they were expected to enhance the city's human capital, becoming the drivers of innovation and urban growth (Florida, 2002, Florida, 2005). In 2004, Treasure Hill was designated as the first historical community in Taipei City, so the residents could legally lease the houses from the City Government if they wanted to. This strategic incorporation of urban informality and neoliberal urban competition again transformed Taipei's urban informality. The survival of informal buildings, in this sense, is no longer regarded as the favour of particular politicians. Instead, under the influence of urban entrepreneurialism, they were re-imagined as possessing cultural character, were part of the charm of Taipei metropolitan. That is to

say, the sustaining of Taiwan's informal buildings in this period is based on their contribution in a historical and cultural sense, as well as their commercial potential for the city's economic development. As for urban informality itself, it was transformed from the pragmatist product of political struggle, to the symbol of Taipei's path of urban development.

As the capital city, Taipei City has always been the policy laboratory for Taiwan's urban policy learning. The City's experience of negotiating urban informality was soon duplicated by other local governments, such as Taipei County, as the way to deal with informal settlements. However, this form of urban informality was challenged by the new water order stored along with the River County Scheme. Since this waterfront renovation plan involves the re-planning of waterfront areas, many informal settlements locating in the riverbanks would have to be relocated to make rooms for the floodwater. Under the circumstance, Taipei's urban informality became the meshing process between the existing urban idioms and the newly introduced water order.



Figure 8-5 The photograph of Treasure Hill.

Treasure Hill has been pointed as a historical village, and is being used as an art village today.

Source: Wikipedia

## **8.2. The Clashing of Water Order and Informality**

As mentioned in the last chapter, the River County Scheme aims to ease the threats of floods and water pollution by turning the waterfront into public green lands, which can be used for recreational purposes, while granting the river sufficient room to flood during the rain seasons. The River County Scheme was proposed as the solution for the floods that constantly threaten the well-being of the County. By providing sufficient room for water to flow, the vicious water during the rain season was expected to be contained in the widened river channel and the green belt nearby, instead of flowing uncontrollably around the riverside areas. That being said, since the River County Scheme required sufficient room for containing the floods in the rainy season, many riverfront informal settlements were targeted for removal from the riverbanks.

### 8.2.1. *The Disrupted Waterfront Dwelling*

With the River County Scheme being proposed, the water governance in Taipei County was divided into four flagship projects. Big Bi-Tan project is one of four projects situated in the South side of the County. Located in the upstream of Tam-Sui River, Bi-Tan has long been famous as a tourist spot for its scenic beauty. While vendors and newly booming real-estate clustered near the Bi-Tan suspension bridge, a little down the Xin-Dian stream were riverbanks occupied by informal settlements and sandstone yards. The informal settlements on the riverbanks were formed around the 1980s, before the waterfront was prettified and started receiving attention. After the River County Scheme was made, the informal settlements were targeted for handling in order to carry out the riverfront renovation. The relocation of Xi-Jou tribe was a clear case of this disruption. The tribe (see Figure 8-6) was founded in the mid 1980s, and mainly consisted of the indigenous urban migrants from the eastern part of Taiwan. As Taipei urbanised during the 1960s and 1970s, many indigenous people moved to the city seeking jobs in mining businesses and construction sites. Given financial reasons and their preference for a home-like living, they ended up settled down on the riverbank of Xin-Dian stream. AS an early mainlander settled down along the Liu-Gong channel told me:

*'I first came here for fishing, and I found this beautiful place, with water and everything. I have admired this land for quite a while. [...] Then I started growing some vegetables here, building a shelter here. After that, more and more people moved here, so we became as we are now' (Interviewee X3).*



Figure 8-6 Xi-Jou tribe.

Source: ePaper, New Taipei City

As the interviewee points out, living on the riverbank gave indigenous urban migrants the opportunity to function as a tribe. With the village-like buildings and an open space in the middle, the people of the tribe thus can gather together and perform their traditional ceremonies. Needless to say, this tribe provides not merely the living place for these people, but more importantly the crucial ways of maintaining their identity as *Pangcah*, or indigenous people from eastern Taiwan. To the indigenous people living in the tribe, the tribe was an enclave for the self-made urban migrants. As a second generation resident told me:

*‘The younger generation were born here. It’s not perfect here, but at least we can stay as a tribe here. It is important that we can maintain the formation of indigenous tribe. [...] Many people said it’s not fair that we don’t pay rents for the place we live. I said, it’s not about fairness, but choice. I was born here, my*

*father chose here to be his way of life. [...] If you want to speak of fairness, it's unfair for us too that we can't even fix our houses. Anything which requires clear legal status is out of our reach. We can only depend on ourselves. For example, we did not have any the electricity and tap water connection in this tribe until we fought for it during Mayor Su's reign<sup>19</sup>. However, since our tribe was not a registered residential area, we have to pay out electricity by the rate of industrial use, which is three-times as expensive as in residential areas. Our electricity bill is even more expensive than the rent in some place else. [...] I cannot study in the school in this school district, until we got a house number when I was in sixth grade' (Interviewee XI).*

To the people in the tribe, it is the function of the tribe to step in and compensate for the lack of urban policy on indigenous urban migrants; taking care of the single parents, aged people, and the unemployed of 30 years. Once they moved to the public condo the government built for them, the function of the tribe would be compromised, and the rents would be collected from individual households, jeopardising the living of these vulnerable people. This is the reason why they pleaded with the County Government to change the delineation of the river reservation zone, letting the tribe stay as it is when the 42 households in the Xi-Jou tribe were asked to move into a condo 20 kilometres away from the Big Bi-Tan.

Another similar case is a community of informal veteran houses along Liu-Gong channel. Liu-gong channel was an irrigation system built in 1740 in south Taipei. It introduced water from the Xin-Dian Stream, nurturing the farmlands in Taipei in the

---

<sup>19</sup> Su Tseng-chang was the Mayor of Taipei County from 1997 to 2004.

past. During the urbanisation in the 70s, the channel was abandoned for irrigational use and turned into a combined drainage system, discharging sewer and rainwater for the city. The veteran's houses community along the channel, on Li-Xing road and Jhong-Hua road, were informal settlements consisting mainly of old veterans and their descendants. After the Big Bi-Tan project was launched, a community-planner proposed the renovation of the whole community, rebuilding the channel as a desirable urban stream, where people can walk along the green waterfront while the clear water runs beside them. To enforce his plan, the veteran houses in this community were planned on being demolished.

Given that the housing prices in the Xin-Dian area almost doubled in the last ten years, private houses became unaffordable to the residents. Without public housing in the area for the residents, once the old veteran houses were demolished the livelihoods of these people would be challenged. One of the first dwellers in this neighbourhood expressed her concern over the demolition:

*'I am unwilling to give up my house here, because all my children were born here. We can't afford to buy house here. Nowaday, a flat would cost over 10 million in this neighbourhood, there is no way we can buy one here. Houses in Xin-Dian are so expensive now, [...] We can only get only couple hundred thousands of relief money, which is only enough to buy a toilet or even a pillar in the new houses of this neighbourhood' (Interviewee L2).*

To the local people who have been living in the community for decades, relocating them from their homes would trigger a huge impact on their living. Without a proper relocation plan, pushing these households into private housing markets would create



uncertainty in the long term. As an NGO worker with long experience working with the mainlanders expressed his concern:

*'Every county or city has their own compensation scheme or relief policy for people in the informal settlements, but they are generally awful. It is impossible for the residents to buy another house merely with their compensation. To the residents, if they stay in the same houses, they can live there for another 30 years with no difficulty. On contrary, if they move [from their houses] to the housing market as tenants, there is no way they can stay in the same area' (Interviewee NI).*

To the informal settlements like the Xi-Jou tribe and Liu-Gong's veteran's-houses community, the demolition plan in the Big Bi-Tan project would put their living in danger, leading to a humanitarian crisis in the County. Given the huge impact on these demolition plans, the government authority had to demonstrate the necessity of demolishing these houses in order to maintain the legitimacy of the whole project.

#### *8.2.2. Hydrological Orders for the Waterfront Planning*

As emphasised earlier, since the whole River County project aims to deliver the order of urban water governance in the city, the lands in the riverfront thus were re-planned based on the assertion of a hydrological order. In the case of the Big Bi-Tan project, two particular reasons were emphasised in the re-planning of the waterfront.

The first reason is urban security. Situated near the river, the Xi-Jou tribe has been co-existing with the floods since their establishment, and adapting their houses accordingly.

*'I have only seen three flood events here. The first two floods were due to the low terrain of the tribe. Once it started raining, the water would swamp up and being really close to us. After that, we moved backward gradually, for there was a higher ground. We built our houses in the foundation of a dyke built in Japanese Colonial time. The last flood event is the time when Mayor Chou visited us. Basing merely on that experience, Chou thinks of here as flooding each year. The press said that our headman had to evacuate from here by boat. But he actually lives in the highest ground in the whole area! If that place really was flooded, I don't know where I can escape to in the whole city. Xi-Jou tribe is locating in the upstream of Xin-Dian stream. If we were flooded, how the downstream would be like? [...] Chou once came here to put on a show, presenting himself as the commander in the evacuation. I really don't like the way he told us to move. We would run away once floods or fire occurs, we wouldn't wait for being killed here. [...] We are indigenous people, we have long experience being here, and we know water. The water would at most overflow gradually from the river, it wouldn't wash down the tribe from the upstream'* (Interviewee XI).

To the people living in the tribe, they are fully aware of the potential threat of the floods. However, instead of leaving the tribe for good, the people there developed a temporal arrangement through time. Since the land they lived on was safe at most times of the year, the people would only have to evacuate the area once the flood alerts were announced. That is to say, the people were able to retain their normal lives in the tribe, keeping the tribe as it is most days. Though such a temporal arrangement

may make sense to the local people, this ambiguous form of land use appears confusing to the local authority. In the information meeting the County Government held to explain the Big Bi-Tan project, Mayor Chou stressed the necessity of keeping a strict land use regulation based on the calculation of flood risk:

*'Since the place is in the river reservation zone, and it was actually flooded in during the typhoon this time, we have to take the safety of people into consideration. [...] If the place is not in the reservation zone, we would let them stay there according to the law. [...] It is a fact that this place was flooded, we can't twist this fact. As a governing authority, we have to make sure people are living in a safe environment' (Chou Hsi-Wei in an information meeting, 3-1-2008).*

Under the water as ordered urban planning, the lands in the riverbank were re-defined as dangerous, un-suitable for human dwelling, hence were doomed to be barred from residential use. To the County Government, relocating people from the riverbanks was actually an adaptation to the extreme weather events. Comparing to the mitigation that aimed to control the climate change, urban adaptation is a more realistic response to global climate change, since it stressed increasing the city's resilience against unanticipated, extreme stress from climate change (Adger, 2000, Adger et al., 2005). The Big Bi-Tan project, which stressed introducing new technologies and constructing public infrastructures can, in this sense, be understood as part of the city's effort to adapt, enhancing the city's capacity for enduring the floods. By anticipating the disastrous floods to come, and letting the floods take over the riverbanks, the floods thus could be contained by the riverbank, and the city could

regain its sense of security toward the escalating threats of flood events. Rooted in Western modern water governance, the River County project aims to gain absolute control over the water by attaining better knowledge of changing hydrological systems and re-examining current land use on the waterfront. However, as argued by Thomas and Twyman (2006), such adaptation projects always leave room for manoeuvre, which may endanger the equity and justice of the society. With the equivocal status of the Xi-Jou tribe in terms of legislation and flood prevention, the existing informality can no longer fit into the new plan of water governance. As a result, relocating the tribe was reckoned to be the price to pay for security, not only of people in the tribe, but of the whole city.

To maintain the integrity of the tribe, the Xi-Jou tribe pleaded to the County Government to re-delineate the river reservation zone, leaving the tribe outside the zone. Nevertheless, to the County Government, the water reservation zone stands for the hydrological order of nature, which is non-negotiable. In the public hearing of the relocation plan, the Water Resource Agency, as the main associate department in the central government, pointed out that leaving the tribe out of the river reservation zone would compromise the place's ability to contain water, threatening the safety of the Xin-Dian area (Coolloud Media, 14-03-2008). As the Deputy Mayor of the County, Lee Hong-Yuan put his foot down and rejected the tribe's plea to stay. While confronting the tribe in a forum of the County's river governance, he states: '*Anything is negotiable, except for living on this particular piece of land*' (Coolloud Media, 13-05-2008). To the County Government, ensuring urban security is prioritised as the County's main concern over Xi-Jou's relocation.

### 8.2.3. *Sanitising Urban Water, Glamourising the Neighbourhood*

Secondly to urban security, improving the urban waterscape of sewerage systems was considered the County Government's main interest in urban water governance. Since the County's water governance was based on the census of household sewerage and the results on water quality of the Tam-Sui River, the untreated sewer water targeted to be handled. Since many informal settlements were situated in the service lanes of other households, they took the blame for the County's poor sewerage connection rate.

As a bureaucrat of the Water Resource Department said:

*'The reason for the poor household sewerage connection rate, you can't imagine, is because the informal buildings. If you wish to connect the sewerage pipes, than the buildings on top of them must be taken cared with. This is a huge problem in Taiwan, since almost all the houses have informal attachment parts. The reason for the 7% connection rate in Taipei County when I assumed the office is it. At that time, the sewerage policy had been promoted for many years, but it got merely 1% done each year, or even less. It's all because of the unresolved informal buildings issue. As long as they are not taken cared of, the local governments' hands were tied' (Interviewee GW2).*

Therefore, in the River County scheme, not only was the issue of urban flood control incorporated into the assemblage of urban informality, but the concept of urban sanitation was also assimilated into this assemblage, holding informality responsible for the County's failure in unfolding its sanitation system.

Flowing between the condos and the veteran houses, Liu-Gong channel was turned

into a huge drain for the sewer in the whole neighbourhood. All the sewers of the households nearby were flushed down the channel, running slowly toward the Xindian stream. Since Chou's administration was committed to transforming the urban water, the stinky channel appears an issue to be tackled. In an interview, a bureaucrat in the planning department told me the main reason for the demolition of these veteran houses is get enough room for connecting sewerage systems and rebuilding the channel.

*'River County was the major schemes of the former Mayor Chou's campaign. We found Liu-gong channel, though not a real river, have the potential to be a waterfront park, that's why we include the channel in River City Project. We want to create a green park with stream, bringing water to people's leisure time. We also expect the new park could lower the temperature of that area, like what Geong Gye River did in Seoul. [...] If we left the informal settlement unresolved, we can't carry out our plan for the channel. As the part of channel we have renovated, it was also occupied by people. The space [beside the channel] people now walk on was occupied by squatters (see Figure 8-7, Figure 8-8, Figure 8-9), we can never build the lane along the channel if we didn't demolished the informal settlements. Handling these squatters is the precondition for us to restore the channel' (Interviewee G1).*



Figure 8-7 The informal veteran houses and Liu-Gong channel.

Source: The author.



Figure 8-8 The veteran houses community and the condo they live across from.

Source: The author.



Figure 8-9 The first section of Liu-gong channel.

This part of channel has been renovated in the phase 1 of the renovation project. Source: The author.

The kind of renovation the County Government desired for the channel is not merely to unfold the sewerage system to this neighbourhood, but to construct a whole system for Liu-gong channel's glamorisation. Due to the complicated informality of the veteran houses, the County Government consigned the renovation project to the community-planning system, hoping to minimise the impact the renovation may have on the community. To actualise the County Government's vision for the channel, the community-planner visited Japan and South Korea to learn about the waterfront transformation that the County Government aimed for.

*'We visited Kamo River, Kama River in Japan and Geong Gye River in in South*



*Korea, since we face the similar sewage problem in Liu-gong River's case. Besides, we also tried to learn the way they manage the houses and shops nearby. Taipei County Government brought up this project on account of urban development, it is just unlikely for them to ignore the fact that the 3.8 kilometres long channel is dirty and stinky. We are planning to turn this undesirable landscape into a park that can bring people to water. [...] Another reason we put these three rivers for referencing is the way they took advantage of the riverside, they built some zigzag stone-paved paths along the sides of the river, diverting cars in the separated drive ways. So when you walk on the paths, you feel like walking in a quiet lane. Indeed Liu-gong channel has its own unique characters, and we will certainly have some adjustment base on those characters. But still, we hope to recreate the feeling we had for the cases [referring Kamo River, Kama River and Geong Gye River], making people feel relaxed when walking along the channel' (Interviewee P1).*

Through visiting the cases in Japan and South Korea, a specific type of waterfront renovation was brought into Taiwan: connecting the sewer of the neighbourhood to the main sewerage system, with the pipes embedded along the side of the channel leaving only clear rain water in the channel. On the top of sewerage pipes, pedestrian paths were laid with the plants on the sides, so the channel can be made over into a scenic place, bringing people to the water, as the County Government wished for in the River County project. To reflect the extent of the change, a certain amount of space is required. The veteran houses along the Liu-Gong channel thus were planned to be demolished. As the community planner further elaborated:

*'At first, we wanted to demolish all the informal buildings along the channel. We wanted to do the public space justice. After the field research, we found that not all parts of the buildings were illegal. Some of the houses are partially built on private land so we decided to demolish only the parts in the three metres buffer of the channel. That way, some of the houses would only lose their toilets or kitchens, whilst the most parts of their houses could remain functional. Furthermore, this also could keep the sewer from running into the channel. The reason the channel is so stinky, is partly because the residents poured sewage in the channel, to solve the Liu-gong channel problem, is in some level to solve the sewage problem' (Interviewee P1).*

Now that the urge for clearer water was prioritised as one of the County's primary goals, the veteran houses were reckoned to be the obstacle between the County and the clearer waterscape. With the renovation project proposed, the veteran houses along the Liu-Gong channel suddenly became the scapegoat for the contamination of the channel. In my interview, the local headman of the whole neighbourhood held the veteran houses responsible for the pollution of the neighbourhood:

*'Most part of this neighbourhood was connected [to the sewerage system], only the front [the neighbourhood near the Liu-Gong Channel] was left out. So, whatever they do. They could even cover the sewer up, if that is what it takes to stop us from smelling it. These parts [referring their toilets] were extended, they have no septic tank, [...] There were at least septic tanks in our houses, the sewer we released were cleaner, and smell better' (Interviewee LH).*

To the County Government and some people living nearby, the existence of the

veteran's-houses community is deemed incompatible with the County Government's plan of renovation, and thus has to go. However, the veteran's-houses community was actually left out of the sewerage system plans unwillingly. A second-generation of the mainlander told me how unfair they feel for being blamed for the pollution in the neighbourhood:

*'The sewerage pipes in the neighborhood have not been connected to the main sewerage system, probably due to the unresolved legal situation here. [...] We are too like to change the current condition about the channel, but we can't do it by ourselves. We hope the Government could intervene in the situation here, since the water management takes huge investment and professional assistance. [...] People who live in this area thought we are the cause of the filthy channel, due to we live by the channel, and we do pour our sewage in the channel. But it's really unfair blaming us for the dirty channel, considering all people living in Pei-Xin Road also pour their sewage in the channel' (Interviewee L2).*

Being blamed for the deterioration of the channel, the people in the veteran's-houses community felt undeserving of the bad name. In fact, the houses in the whole neighbourhood were not connected to the sewerage system until Chou's reign, hence the channel was the sewer shared by the whole community before then. Facing the channel directly, the veteran houses community actually suffered the most from the pollution of the channel. Witnessing the polluting of the Liu-Gong channel, a early migrant told me:

*'The water used to be clean here. We use to depend on the water here. Women used to wash their clothes while their children played in water here. It was after*

*many condos were built here two or three decades ago, their sewer started coming down to the channel, three times a day. It's so stink! We can smell that while we were cooking. People even threw their garbage down to the channel from their buildings' (Interviewee L1).*

As part of the urban informality in Taiwan, the urban sewer governance was ignored deliberately so there wouldn't be a financial burden either to the local governments or the people. Since all houses--despite their legal status—were once not connected to the sewerage system, collectively they all took part in the deterioration of the channel. That being said, given with the assertion of the new hydrological order, the measures for a secure waterfront and treating urban sewers was prioritised before all other forms of urban land use.

### **8.3. Conclusion: The Assemblage of Hydrological Gentrification**

Compared to the urban development of cities in the West, Taiwan's urban growth has undergone a significant change in a relatively short time. To develop the city without sufficient financial support, enforcing the urban plan selectively became the main way to compensate for the lack of urban public infrastructures and proper housing policy. Since the goal for settling down the mainlanders and urban migrants was prioritised to sustain the legitimacy of sovereignty and the Country's economic growth, the enforcement of urban land use regulation was intentionally neglected. This negligence on informal buildings, in an Agambenian view, can be understood as the state of exception, a governmental strategy (Agamben, 1998). That is to say, the non-performance on enforcing the land regulation was itself a form of governance.

However, this does not mean the state stopped caring/controlling the well-being of the people living inside the informal settlements. With the cessation of executing regulations in urban planning, the local government retained its control over the informal settlements by other means. The weather prediction and flood alert systems, for example, were established and perfected over the years to ensure the safety of the households vulnerable to floods. With the temporal arrangement they developed together through time, the damage of floods hence could be managed and minimised. To many of the urban squatters, it was exactly the risk for floods keeping the land from other uses, making their dwelling possible in the first place. However, with the introducing of new hydrological rationales in urban planning, the existing way of coping with floods was characterised as dangerous and irrational, and therefore unsuitable for the County Government's attempt to regain its control over floods. Inheriting the traits of modern water control, the new hydrological orders were keen to tame the urban water thoroughly, eliminating the chance for the catastrophic scenario of the floods. It was the idea of absolute control over lands in the waterfront which made the temporal arrangement intolerable to the whole project.

Assemblage theory in this case provides the framework for a more engaged thinking toward the inter-relation between the issues of urban housing, building regulations, democratisation, infrastructures, and urban water. In the case of the Xi-Jou tribe and the veteran houses along the Liu-Gong channel, they existed as the constant assembling process of the vulnerable urban migrants and mainlanders, their local knowledge of urban flood and ways with government bureaus, and the lands that were once lacking in economic value for their being dangerous and filthy. With the new

ideas of flood management and new technology in sewage treatment coming into play, the existing relations between the constituents of this assemblage were disassembled, and were reassembled into the new form of urban water governance; an assemblage that is dominated by the power of water rationale, of hydrological gentrification. In the last chapter, I have introduced the idea of hydrological gentrification as the re-asserting of a hydrological order that dismantled people's existing relation with water, in terms of concept or dwelling, and the re-engagement between urban bad water and an economical rationale. By employing assemblage thinking into the discussion of Taipei's waterfront renovation, the significant of water, new governing rationale and technology, and the urban informality can all be recognised, without leaning uncontrollably toward one particular force that was assumed to be dominating the current form of Taipei's bad water governance. In the next chapter, I will further elaborate how this hydrological gentrification negotiates its way into the daily lives of local communities, and how the local people actively participate in this negotiating process.

## **9. Entrepreneurialising Urban Informality**

### **9.1. Introduction**

In the last chapter I demonstrated the encounter between Taipei's hydrological rationale in the River County scheme and the city's contemporary urban informality. Through their co-evolving process, the new assemblage of hydrological gentrification had occurred and threatened the living of the informal communities that had been living on the waterfront for decades. That being said, with years of experience in dealing with Taiwan's urban informality, the local governments have known better than to directly evict the informal settlements on the waterfront areas. To avoid the fierce confrontations like the situation of reserved parklands No. 14 and 15, as mentioned in the last chapter, the local governments have learned to deal with the informal settlements through the assemblage of practices, which includes the community planning system, the ideology of urban entrepreneurialism, and the discourse of urban security. With these measures, the local government gets to settle the direct conflict of interest between the unfolding of waterfront renovation plan and the livelihood of the urban squatters. However, this assemblage of practices is not merely the conducting of urban policy made by the local government. Through the negotiation between the County government and the local communities, the local people also learned to forge the common interest they shared with the waterfront renovation project, actively fitting themselves into the new waterfront project, so as to sustain their living in the watershed. This chapter therefore aims to address the re-

assembling of the waterfront renovation project. Since this chapter adopts a more grounded perspective on the practices of assemblage, it thus emphasises the county government's employment of the community planning system, the facilitating of dialogues between urban entrepreneurialism and urban informality, and the counter-conducting of urban entrepreneurialism.

Before further addressing the meshing of urban entrepreneurialism and urban informality, I will first situate the employment of community planning systems in Taiwan's context, illustrating how the River County incorporates the community planning system. Then I am going to further stress how the neoliberal ideology incorporates urban informality in the cases of the Xi-Jou tribe and the veteran community along the Liu-Gong channel, and became a neoliberalised form of urban informality.

## **9.2. Neoliberalising through the Community**

Taipei's urban governance has been under the influence of neoliberal urbanism since the late 1980s. With the country's economic dependency on the US, its fiscal expansion due to the investment on public infrastructures, and the privatising of public sector enterprises, neoliberalism soon took the state at full tilt (Tsai, 2001). The community planning system, under the circumstance, was at first being embraced by the state as the main measure to penetrate the local communities, enhancing the state's control over local groups, and later being employed as the way to de-politicised state policy through its institutionalisation and professionalisation (Huang and Hsu, 2011). In that case, the community-planning system, in the case of Taipei, can be understood



as the policy vehicle to carry out the broader political project (Raco et al., 2011), which includes its contending with urban informality. By adopting neoliberal urbanism, the county government was thus able to reclaim the lands while avoiding appearing as a reckless exploiter that destroys people's lives without consideration. In Taipei's case, two measures were widely adopted in the county government's water rehabilitation. First, through introducing entrepreneurial thinking, the county was thus able to get support for the project from most of the people, engaging people in the city's urban development. Second, through adopting community planning as the mediator between the county government and the local people, it legitimised the county government's project to demolish the old informal settlements.

#### *9.2.1. The Urban Entrepreneurialism Reaching Out*

As emphasised in chapter 6, since the new hydrological order unfolded in the River County project was afflicted with the existing dwelling relation between the waterfront and its current dwellers, the Taipei County government was determined to reclaim the lands on the waterfront. That being said, given the ambiguous legal status of informal buildings, the county government could not enforce the renovation project without negotiating with the informal settlements. For example, in order to enhance the water quality of Tam-Sui river, the urban domestic plumbing system should all be connected to the sewerage system before being released to the river. The informal attachments, that occupy the service lanes, therefore will have to be torn down for the construction to unfold. Instead of threatening the residents with the punishments, the county government decided to carry out the practices of assemblage (Li, 2007), which

involves forging alignment with local people, and emphasising their scientific discourses when pursuing the technical solution of the urban bad water issues. In order to do so, the County Government hooked on economic incentives for cooperating with the sewage system construction plan, as stated by a civil servant in the county government:

*'They don't have to pay a dime if they decide to connect the sewerage pipes now. If they don't do it now, they will have to pay 90,000 NTD for the job to be done once the regulations of household sewerage were made mandatory. [...] They would normally agree in the end for it does make differences. Once the sewage was piped to the main system, you would stop smelling the stink almost immediately, and all the rats, roaches, and mosquitoes would be gone. They would not only be able to enjoy a better living environment, but also their houses would worth a lot more and being much easier to sell' (Interviewee GW2).*

By engaging the unfolding of sewerage systems with the economic incentive of real-estate growth, the removing of informal attachments in the service was no longer considered a power abuse of the state, but a necessary improvement on urban sanitation, and a small investment for local real-estate development. In doing so, people can benefit from the sewerage system and a cleaner living environment, whilst getting further economic reward for their 'rational behaviour'. Now that the real-estate owners expect to profit from the unfolding of sewerage systems, many of the residents would even try to persuade their neighbours to cooperate:

*'We normally would communicate with them first, we would only lodge accusations if its necessary. [...] We would only tear down the buildings if there*

*were only 1 or 2 buildings left in an alley. But the cases are rare, only about one in a hundred. We would normally try to communicate with them first. Once most of them were convinced, the neighbours would talk the remaining households into the sewerage connection. It's more efficient to work with such peer pressure. [...] My other tip is to postpone the construction of whole alley if there were too many people refuse to remove their extensions. [...] Once I do that, a lot of places would be left out from the construction. In my experiences, after half a year, those who refused the construction would come here and ask us to do it. They even asked local councillors to intercede for them. [...] At that point, I will just have to tell them "I would try to squeeze some budget out for that.", and do the jobs for the un-connected places all at once. I think it's all about being genuine. Once they find that it is actually about their own benefit, and we can even postpone the job indefinitely if they wish, they normally would agree in the end' (Interviewee GW2).*

By presenting the unfolding of sewerage systems as a part of local real-estate development, the county government incorporates the construction of the sewerage system into the neoliberal urbanism, the seeking of a tidier environment - soon to be loaded with economic incentives - as a profitable thing to do. To the local owners of private properties, the concern for tearing down their back yards was transformed from the issue of household space management into an expectation of enhanced value for their private assets. In that sense, the property-based urban development was carried out as the urban hegemonic project of the county. Through employing the technology in engineering, and the rationales of urban planning, the local government

and the people co-produced an alignment in the pursuit of a safer, cleaner, urban landscape with increasing real-estate value.

However, such a property-based urban development negotiates with local people through their ownership of private properties. For those who do not legally own their houses, the county government's reclaiming of the land appears solely as a threat to their living environments. In other words, they were actually excluded from this urban hegemonic project. This conflict happens most commonly to those who live in the informal settlements in the county. Since their houses barely have any market value, they were left out of this property-based urban development. Not only can they not enjoy the value increase of their houses, the retrieving of the land would even displace them, given the insubstantial public housing policy. Since they cannot be negotiated through the economic rationale, the county government has to change their approach, parleying with the local people in the informal settlements through the community planning system.

### *9.2.2. Community Planning as the Entrepreneurial Fix*

Since the old assemblage of engineering technology, water knowledge, and the logic of markets can only forge the alignment between the local government and the people who legally own their private properties, the informal settlements were largely left out of this negotiation process. Therefore, instead of rectifying the goal of the whole waterfront renovating plan, the Taipei County Government adopted the community planning system as an adjustment, bringing in this system as a new part of the re-assembling process of urban water governance. To the county government, there were

three advantages for adopting a community planning system in the rationalisation of Taipei's water governance: avoiding confrontation, getting consent, and settling the interest conflict. First, by framing the renovation project as a community project, the county government could avoid direct confrontation with the local community once there is any conflict of interest that may jeopardise the legitimacy of the plan. This is the case of informal settlements along the Liu-Gong channel. Since the county government wanted to renovate the channel, turning the channel into a clear, pedestrian friendly environment, a community-planning system was employed as the mediator between the county government and the local community. As a civil servant in the Urban and Rural Development Department pointed out in the interview:

*'It was one of the community-planning projects, the national scheme funded by Ministry of Interior, aiming to promote the idea of 'bottom-up' development for local communities in 2002. It wasn't brought into action until 2005, when Taipei Liu-gong Irrigation Association requested the County Government to renovate the channel. Since the Association only possess the ownership of the land but has no legal power to enforce any kind of actual action to the residents upon it. The Association said the bad shape of the channel embarrassed them, so they turned to the County Government for the revitalization of the channel' (Interviewee G1).*

The Liu-Gong Irrigation Association was a semi-official organisation that used to be responsible for the irrigation system in the past. Although the channel has lost its function of irrigation during urbanisation, the association still possesses the legal right to the channel. Therefore, when the association came to the county government, the Department of Urban and Rural Development soon decided to introduce them with

the community-planner who proposed the renovation back in 2002. As the community-planner stated:

*'It's complicated, because Urban and Rural Development Department does not possess the ownership of the land, it belongs to Taipei Liu-gong Irrigation Association, which is the association providing the Department of Urban and Rural Development the land for this project without charges. The association hope the County Government would clean the place for them, therefore the County Government, as a collaborator, is actually not in the position to decide whether the informal settlement should stay' (Interviewee P1).*

For the county government, employing the community-planning system in this case not only enables them to renovate the channel, but it would also spare the county government and the irrigation association from direct confrontation with the squatters in the neighbourhood. As a local resident L1 pointed out more directly:

*'The Association only met us a couple times in the beginning, then they put County Government in charge, which means they let the County Government take the responsibility. They don't like to confront us directly' (Interviewee L1).*

Given that facing the people that the project might displace was a burden that both the associate and the county government did not wish to bear, they turned to the community planning system for assistance. In the interview, an officer working in the Department of Urban and Rural Development expressed the reason they employed a community planning system:

*'The community planners were supposed to interact with local people, gathering their opinion for us while explaining our ideas to them. If they know what we are*

*doing, there will be less confrontation' (Interviewee GW2).*

This quote from the government officer shows that the role of the community planning system here was served as a top-down penetration only to legitimate the policy programmes. Given that the parameters of policy were being constructed and enshrined on the legislative level, and new codes of conduct were being implemented in the discourses and practices of regeneration, little room was being left to the local groups to make their policy input (Raco, 2003, Raco, 2005).

Such communitarianism, according to Jessop (2002), should be regarded as part of neoliberalism, which stresses building public-private partnerships on local affairs. Therefore, this public-private partnership can be seen as the development of neoliberal political rationales and technologies of government, which is the strengthening of the neoliberal governmentality, as in Raco and Imrie (2000)'s words:

*'In developing new subjectivities and linking them to managerial mechanisms of control (which establish tightly defined, calculable spaces of action) urban policy reflects Foucault's paradoxical assertion that in return for a little extra freedom of action, subjects come under greater monitoring, scrutiny, and surveillance by the state' (Raco and Imrie 2000, p. 2201).*

The following interview further demonstrated the community planner's efforts in getting the consent from the local communities by setting the new agenda of sanitising urban sewers:

*'We knocked on every door in Section 2 [of Liu-Gong channel], so we understand the actual condition of most residents. During the visits, some elderly residents even voluntarily tell us about the condition here in the old time, some*

*even show us many old pictures. They told me they hope the channel can be clean again, like the old time when they can swim and catch shrimps in it. Beside the visits, we also visited some local civil societies, they all helped us to understand about the area' (Interviewee P1).*

Since the idea of renovating the badly polluted Liu-Gong channel was appealing to most people, the local residents were even keen, without knowing the project might displace them:

*'When the residents here were invited to attend the meeting in 2007, we only knew there will be some renovation. Given that those who attended are mostly elderly, they didn't know exactly what this meeting is about. We thought that meeting was aiming to renovate the channel, so we all agreed. [...] When they told us they were going to renovate here in 2007, everyone was excited about it. We thought they were only planning to straighten the area, make it more beautiful. It was until they hold the second meeting, mentioning about turning this area into a park, we started to realize what this whole project is all about' (Interviewee L2).*

With the community planner making a compelling case for renovation, the pictures of clear channel water with shady pedestrian areas alongside it enticed the people to back the plan, while shifting attention away from the actual impact of the project. This is the second merit supporting the county government's employment of a community-planning system. The community project could engage not only the informal settlements along the channel, but also the households nearby. The support from the people nearby could strengthen the legitimacy of the project, taking some heat off the



community planner and county government. As the head of neighbourhood told me during our interview:

*'The once beautiful stream now has become a huge sewer, that is why we must change it. The people in the neighbourhood don't want it to be listed as a historical site. We want them demolished for it has become too old, and too disorganized. Back when Su Tseng-Chang was the Mayor, he promised to renovate the channel into something like the Cheong-Gye Cheon in Seoul. I was a citizen representative [at that time], and I thought it was a fantastic idea. It was beautiful and the water will not be too deep so we can let our children play in the water. It sounds great to enclose the sewer, and building a footpath on top of it'*  
(Interviewee LH).

By expanding the stakeholders in the project, providing the blueprint of the beautiful stream that the channel may turn into, the community planner got the consent for renovation from the whole neighbourhood except for those who were targeted to be torn down. The county government was thus equipped with the legitimacy to carry out the renovation project. In that sense, the community planning was used to penetrate local communities on the state's behalf, inserting state policy into the communities. That being said, the community planning system also opened a new channel for negotiation. Through the negotiation with local people, the community planner not only secured the plan by getting more support from people in the neighbourhood, but it also opened a new door for settling the conflicting interests of the people that may be affected by the plan. In our interview, the community planner of the renovation project describes their devotion to the local community as help for both the living

rights of the residents and the agenda for urban water governance:

*'We did carry out the community-planning project in order to communicate with local residents and comprehend their opinions. However, 3.8 kilometres is a long distance, not every resident along the channel can understand what we actually were trying to do. [...] We are not putting a knife in people's neck, urging them to obey what the government want, we are just standing on a side-line, assisting them as a professional consultant, enabling them to advocate their own voice by providing them the resources and knowledge. We are hoping to be the mediator or negotiator in this case. [...] At first, we wanted to demolish all the informal buildings along the channel. We wanted to do the public space justice. After the field research, we found that not all parts of the buildings were illegal. Some of the houses are partially built on private land so we decided to demolish only the parts in the three metres radius of the channel. That way, some of the houses would only lose their toilets or kitchens, whilst the most parts of their houses could remain functional. Furthermore, this also could keep the sewer from running into the channel. [...] This is all for draining and flood prevention. The [channel] renovation is necessary' (Interviewee P1).*

To the community planner, they act as the mediator between the county government and the local residents, providing solutions to protect the local people against reckless demolition, which the county government might otherwise proceed with, whilst making sure the county government could rationalise the county's water for the sake of urban security and sanitation. Since it takes an urban planning and architecture degree to become a community planner, most of the community planners were deeply

influenced by the modern idea of tamed water and urban landscape from their training. The solution they laid out for the local community was deeply embedded in the order of modern water. As shown in the interview with interviewee P1, though the impact of the renovation project on the local people is obvious, the project is still considered as unavoidably problematic as it is hard for the rainwater and the urban sewer to be handled with modern hydrological logic. Aside from the ideas of modern water, their conception of urban planning and private ownership of the lands also affects the community-planner's handling of informal settlements:

*'The irrigation association spots this problem because it has been paying the tax for a long time. As the landowner, they would feel inflicted for being the one paying tax instead of the actual users of the lands. They even wished to initiate a prosecution, but it would take too much time. That is the reason the county government stepped in as the middleman, hoping to regenerate the whole place. [...] As a planner, we have to consider if they are the legitimate users. These are not their lands, they belongs to the irrigation association. It is understandable that they wish the land to have certain hydraulic function. That is why they provided the land to the county government, hoping county government to renovate the channel for them. [...] We hope to keep the building, using it as public space. We hope it could be equally accessed by the public, rather than just some particular people' (Interviewee P1).*

Since modern urban planning was accustomed to considering lands in terms of their legal ownership, it was deficient in dealing with urban informality, as mentioned in the last chapter. Therefore, when the community planner of the renovation project was

making the solution, he planned the usage of the lands along the channel according solely to their legal ownership, disregarding the fact that the dwelling of the informal settlement was due to the historical context of urban informality in the county. Since the urban planning originated from the western model of urban infrastructures and land use categories, the current form of sewage management and the ambiguous legal status of informal settlements were incompatible. Given the background of community planners, the county government could count on the community planners to help them deal with the informal settlements, knowing their idea of modern water and urban planning would be followed through in most cases.

In this sense, community planning was used as the carrier of the state's will. Instead of being a bottom-up mechanism, which democratised the policy making process, it was the county government who initiated the project, hoping to maximise support for the plan. Given that the squatters do not have legal right to the houses they are living in, they cannot be engaged in the modernisation of urban water governance through the economic rationale. Community planning systems hence exist as a fix for the circumstances where the force of market ends.

### **9.3. Entrepreneurialised Informality, Entrepreneurialised Community**

As demonstrated earlier, community planning systems have been incorporated into the urban water governance assemblage as the channel through which the county government was able to negotiate with local communities in the encounter between rationalisation of Taipei's waterscape and an urban informality. Given that the rehabilitating of urban bad water was deeply framed in the economic rationale of

urban entrepreneurialism, which emphasised generating property-based urban development through further sanitising and securing the city against water pollution and disastrous floods, it overwhelmingly incorporated the middle class in the city, leaving the local squatters alone facing demolition and possible displacement. Having said that, the assemblage of Taipei's waterfront renovating plan was far beyond a one-sided exertion by the local government. Since the people from the informal settlements were under the pressure of eviction, they had to re-connect their sustenance with the discourses of urban entrepreneurialism. I will argue, through strategically adopting urban entrepreneurialism while recognising community planning as a method of resistance, the urban informality was thus transformed into the new merchandise of the city, sustaining its existence whilst sheltering the people who live upon it.

### *9.3.1. Entrepreneurialising Urban Informality: The Strategically Embracing*

Now that the modern urban orders were channelled to local communities through the community planning system, the informal settlements had to cope with the change in order to stay. To sustain their dwelling along the waterfront, the communities of the informal settlements soon learnt to strategically embrace urban entrepreneurialism, presenting themselves as the living history, the evidence of Taipei's informality, so the value of their existence could be acknowledged. Using community planning as the channel, the informal settlements counter proposed different versions of waterfront renovation, actively reincorporating the informal settlements into the urban entrepreneurialism to fit themselves into the new urban water project. In the case of

the informal settlements along the Liu-Gong channel, they proposed the idea of turning the community into a cultural landscape. They argue that the informal settlements along the Liu-Gong channel exist not only as the witness to Taipei's urban development, but their being also adds another layer to the city's cultural essence, which could easily be cashed out through the city's real-estate and tourist development. To fit the community and the channel into the county government's plan of water renovation, the local people began with actively engaging with the renovation project. As a second-generation resident who grew up in the community pointed out her vision for the channel in our interview:

*'Sometimes people would talk about covering the channel up, so the smell would stop coming out. But I always tell them this is not the way. It would be a shame if we cover it up, since the channels like this are rare now. If we can separate the sewer [from the channel] and treat it, the channel should be a nice place, where we can enjoy the stream running beside us. [...] Sometimes when I walk along the alley, I do find the zigzag of the alley enjoyable. I notice there were some nostalgic trends are going on, why can't we keep the old houses, instead of tearing them down, while building new, fake ones' (Interviewee L2)?*

To interviewee L2, the renovation of the channel and the existing of the informal settlements were compatible. By subsuming the informal settlements as a part of the rehabilitation, not only the urban waterscape would be sanitised, but also the quirkiness of the informal settlements could at the same time offer more opportunities for tourist or real-estate development. Since the Liu-Gong channel community were formed across a long period, constructed entirely according to the need of each

individual household, the rustic, uncouth appearance and the unmethodical clustering of the informal settlements were drastically in contrast with the modern congregate housing nearby (see Figure 9-1). To interviewee L2, it is this unique semblance of the informal settlements that should be considered as a part of the city's attraction, as the cultural, historical façade of modern Taipei.

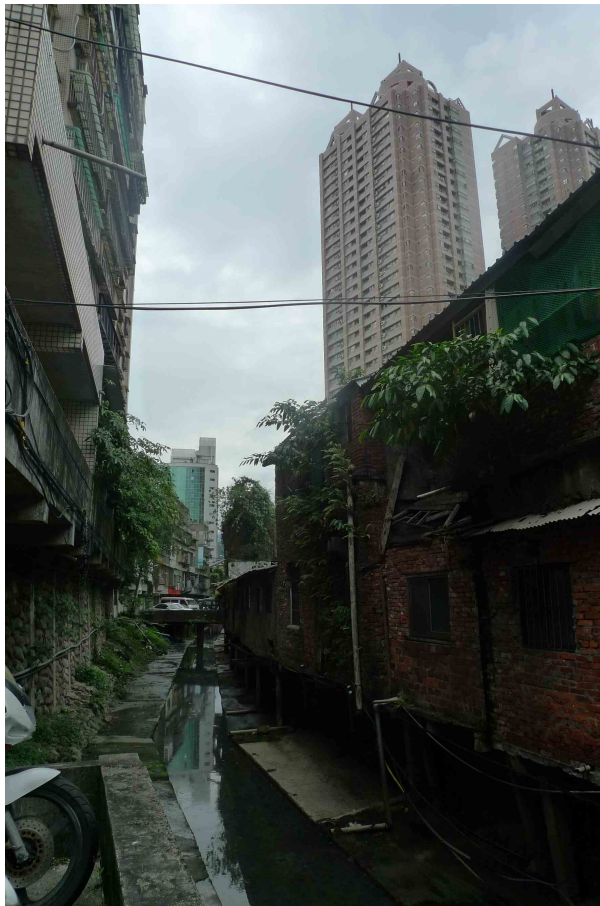


Figure 9-1 The newly built modern buildings located near the Liu-Gong channel.

Source: The author

This style of building is not only peculiar in appearance, but it also shapes people's interaction within the community. In many cases of the informal settlements, the houses would start as a small private room from the shore, then gradually extended

toward the channel as a walkway, then as kitchen or toilet, since the channel was expected to take the household sewage away. This unconventional way of spatial arrangement largely increased the community's solidarity:

*'Mrs Huang is the elder, and the representative of the community, so we often go chat in her place or play Chinese chess in No. 7 [refereeing the number of a house]. These are our public space, where we engage with each other. Everyday we chat, we share our lives together, and it has been like this for thirty years'*  
*(Interviewee L2).*

As shown in Figure 9-2, the extension spaces were flexibly used as walkways, storages, or room for gathering; they hugely increase the chance of people meeting and interacting with each other, and consequently enhanced the intimacy within the community (see Figure 9-3).





Figure 9-2 The extensions of informal settlements.

They are often being used as pedestrian or storage. Source: The author.



Figure 9-3 The extensions of informal settlements.

Since the extensions were used as pedestrian and for personal usage, the shared space largely increase the chance for interaction between the people in this community, enhancing their solidarity.

Source: The author.

Together, the squiggly alley, the rustic buildings, and the intimate social relations interweave into an unadorned way of living, contrasting with the condominiums lining nearby, which filled with households that barely know each other. To counteract the county government's plan of rationalising the neighbourhood, the Liu-Gong informal settlements community engineered their cultural features to be re-engaged with the economic rationale of urban development, turning the community into a cultural/tourist attraction. With the help from many associated NGOs, the local residents even actively marketed the settlements as a historical/cultural site in the city by decorating the community with old photos and mundane things like clothes, as the showcase of their everyday lives:

*'We held the photograph gala, hoping to show the county government, showing them that there is more to this place, rather than being merely a stinky sewer' (Interviewee L2).*

*'I was going to fold the clothes, but they told me that I should keep it there, as a part of the exhibition' (Interviewee L1).*

By distinguishing the cultural value of the community, the commercial potentials of the informal settlements thus could be further emphasised. Such combining of urban informality with entrepreneurialism also offers economic incentives for the neighbourhood nearby, gaining support for the counterproposal. In the interview, the head of the neighbourhood told me how the cultural landscape project changed his opinion about the sustaining of the informal settlements:

*'Of course the people at this side do not want them to become a 'historical site', we want them gone. They are too old and too messy. However, if they were renovated, it is whole other story. [...] If the government could remodel the street, like what they do for the Shen-Keng Old Street, then it would be a different case. [...] So the government should think about how to prettify, greenify the place. Like in the case of the Shen-keng Old Street, the small business [along the street] really picked up since the place was rehabilitated. However, if they stay unrefined, then I would prefer them to be torn down. [...] As the head of t he neighbourhood, I think the houses could stay if the government can turn the place into a tourist attraction. If they don't, then the place should be demolished. If the Planning Bureau is incapable to do that, how could you call the mess a "historical site"' (Interviewee LH)*

To Interviewee LH, the meaning of the informal settlements' sustaining depends entirely on the tourist potential they could possibly provide for the county:

*'To us, the renovation is necessary, the preserve without modification is meaningless. If the government decides to preserve the houses, then the government has to help them remodelling their houses, giving these houses a facelift, making them attractive to the tourists. [...] If Cultural Affair Department is persuaded by the planning experts, and decides to preserve the veteran houses, the government has to build some monumental archway and the new sewage system, so the tourists can take beautiful pictures during their visits' (Interviewee LH)?*

Since the informal settlements were considered the source of negative environmental and aesthetical impacts of neighbourhood. To the people living in the neighbourhood, the rehabilitation project is the way through which the informal settlements were able to earn their right to stay. That is to say, the strategy of incorporating urban informality into urban entrepreneurialism is actually an act of pragmatism, through which the informal settlements negotiate their stay by market rule, rather than their right to the houses *per se*.

An even more evident case would be the establishing of the Xi-Jou tribe as the Aboriginal Cultural Park. As illustrated earlier, the tribe was planned to be relocated, since the county government decided to contain the urban floods, retreating residents from the riverbanks. Through the assistance of experts in community planning, the tribe was argued as being the witnesses of the lives of indigenous urban immigrants, who have long been struggling with economical hardship and identity crises through the year. By turning the tribe into an aboriginal cultural park, the living style of urban indigenous people and their informal settlements, which were the key reason that could maintain their function as a tribe, were recognised for their significance in Taipei's urban development. That being said, the demarcation of flood zones by the county government remains unchallengeable. In the end, the tribe and the county government reached an agreement to relocate only the households in the lower ground to an adjacent but higher ground, so the tribe could keep its current function while not being exposed to the threat of floods. As a second generation resident of the tribe, who has been living practically his whole life in the tribe told me:

*'In the beginning, they [referring other people in the tribe] would not accept the idea. The older generation does not want to move. For younger generation like me, the tribe is not the perfect, but at least it remains the form of tribe. [...] The government initially wanted us to move, but after we made a counter proposal, they started considering the possibility of letting us keep our tribe. In the end, they agreed to let us to rebuild the tribe in other place. This is a huge compromise for us too, for we don not want to leave here at all. Xi-Jou tribe would not be Xi-Jou [meaning alluvial plain] tribe once we leave here. It was not until the councilors and legislators stepped in, offered us the land nearby, we started considering moving here, since we could still be Xi-Jou after we move' (Interviewee XI).*

The aboriginal cultural park sustains the tribe's reamaining as an informal settlements community, not only through retreating from the flood zone, granting the tribe with appropriate land use categories, but also by reconnecting the tribe with the urban tenant system, partially formalising the informal settlements as a fix for urban informality:

*'We will have to pay the rent. We will found our own association, establishing as a legal person to run the tribe, paying for the rent. We consider it being fair enough for us to pay the rent. I will pay what I should pay, but it has to be reasonable, affordable so the tribe could sustain themselves. [...] Some people will be not able to pay the rent. So we are thinking about learning to run some small business, something the tribe could manage together, so that the tribe could have a mutual fund. That way, if there are some people in the tribe have*

*difficulties, we can still maintain our living' (Interviewee XI).*

In this sense, entrepreneurialising the informal settlements is actually the rationalisation of the urban land use, so that the precious urban spaces can be optimised for their economically productive use, while the market rule of the user-pays principle could finally negotiate its way into informal settlements. With the meshing of urban entrepreneurialism and urban informality, the urban waterfront renovation projects in the Liu-Gong channel community and the Xi-Jou tribe have reassembled into a new assemblage, the practice of entrepreneurialising Taipei's urban informality.

### *9.3.2. The Anti-Caricaturing of Informality: Counter-Conducting the Entrepreneurial Thinking*

Through its entwining with entrepreneurial thinking, and the mediation of community planning, the modern imagination of rational urban land use, the ultimate control over water, and the market rule, urban informality was thus redefined from a spatial strategy for urban housing to a new urban economic strategy. The unsystematic building of houses, which was once regarded as the compromise of a modern urban plan, now has been reimagined as of cultural significance to the city. The wiggly lanes, the grungy walls, and the tattered roofs that consisted the informal settlements, now are recognised as the momentous features of Taipei. Having said that, the forging of economic partnerships between local residents in the informal settlements and the local government was not the ultimate penetration of an economic rationale. On the contrary, the local people's establishment of the economic alignment was merely a

catch for staying, the price they have to pay for using their own houses. In other words, their consent for the new proposal were based on the pragmatism of the counter proposal. Such a different interpretation of entrepreneurial thinking functions as a counter conduct of the rationalisation of urban waterscapes. By counter conduct of the water renovation project, I mean playing along with the county government's will to rehabilitate the city's development, but misinterpreting the aims and the goals of the renovation project on purposes, as in Foucault (2009)'s words: *'wanting to be conducted differently, by other leaders (conducteurs) and other shepherds, towards other objectives and forms of salvation, and through other procedures and methods.* (p.194)' For example, to interviewee L1 from Liu-Gong informal settlements, the renovation project is just another excuse for evicting them from the lands:

*'The removing plan is about building new houses, houses building is everywhere nowadays. Everyone is making money of it. [...] Like the area near City Hall, they told people they are going to build parks, but they always turn out as huge condominiums. Governments are always lying; they are all engaged with big corporates' (Interviewee L1)!*

By counter conducting the government's accusing of water pollution, they reject being held as the source of the neighbourhood's degradation, so that people could consequently relieve themselves of the blame for deterioration in the environment. Besides spreading conspiracy about the 'true reason' for renovation, the local people from the informal settlements also developed a way to cope with the need for entrepreneurialism. To interviewee X1 from the Xi-Jou tribe, he separated the old, existing way of living in the tribe from the coerced, commercialised one clearly,

hoping to protect what is authentic and real to him:

*'The problem now is, if the County Government has certain idea about the tribe, we would have to think about how they would fit into the tribe. This is a rebuild project, they really should not have too much opinion besides the appearance of the houses. They should let us be as long as we pay the rent. If they interfere too much, acting like we are subordinate to them, then this plan is doomed to fail. To protect this community's way of living, they have to stop bothering us with so many things. They have to stop making all these rules for the tribe, this is not a zoo! [...] If they want to make the tribe a tourist spot, fine by me, but we have to figure out the way to separate our private lives to this' (Interviewee X1).*

By separating the compromises they made for staying from their original lives, they could thus resist the temptation of urban entrepreneurialism, as Interviewee X1 further elaborated:

*'I hate it when the government said they want to pass down tradition, asking us to hold a Harvest Festival. Our tradition is not just singing and dancing. The Amis I-Li-Sin is a sacred worship to our ancestors, it is so much more than singing and dancing. If no one says otherwise, would our children mistakenly reckoned the festival merely as merely sing and dance? If we really want to pass on our tradition, we can't act according entirely to other people's wishes, since people usually favour only the happy part of the festival. The County Government even holds a joint harvest festival, making it a dance competition. The festival should be about worship to our ancestors! Aren't they worried about being haunted by their ancestors? Some people [in the tribe] think the festival*



*may cost a lot of money, therefore we have to apply money from the government, holding the festival as the government's wishes. In some cases, the harvest festivals were even turned into "Harvest and Children's Festival". That's why I brought up an idea of running the harvest festival without any government funds. I managed to convene a three-day festival with less money than what government offered for a one-day festival, and the festival turned out to be much closer to the traditional one, and ended up attracting even more tourists. Indigenous People's Department is a government bureau, and this is what governments do. They always convene events only to attract tourists. [...] We have changed a lot from the tradition, but at least we have to try approaching the tradition as much as possible. The way the government want us to do is actually driving us further away from our tradition' (Interviewee XI).*

Being aware of the neoliberal governing strategy that attempts to conduct a more market-oriented thinking and behaviour, the Xi-Jou tribe actively engaged with the neoliberal urban policy, and counter-proposed a cultural adaptation for the tribe so it can be secured by the community planning system, and be protected from demolition. However, while the tribe strategically embraced urban entrepreneurialism as a counter measure for the state's taking over the waterfront lands, this is not a total penetration of the neoliberal rationale, through which people make decisions economically, valuing things through their prices. The case of the Liu-Gong channel in formal settlements and the Xi-Jou tribe both indicated that the urban squatters adopted urban entrepreneurialism merely as a way to gain their legitimacy in the neoliberalising urban governance, not the consent to the neoliberal ideology. By employing the

concept of counter-conduct, people are no longer treated as merely the victims of certain neoliberal urban policy, but also the capable, agile actors that adapt to the neoliberalisation process, actively taking part in the neoliberalisation process.

#### **9.4. Conclusion**

This chapter focuses on the practices of assemblage, which includes the alignment forging, discourse forming, and strategy adjusting from different parties during the assembling and reassembling process of Taipei's waterfront renovation plan. Urban informality has been existing in Taiwan for decades. Given Taiwan's lack of housing policy, informal settlements turned out to be the way to resist the capitalist force of the real-estates market and the modern idea of urban planning transferred from Western cities. However, with the escalating weather events, these disasters initiated new opportunities to incorporate the informal settlements into the rationalisation of urban waterscapes. Taipei's waterfront renovation plan therefore includes a series of practices. By employing urban entrepreneurialism and the community planning system, the local government was thus able to find the common interest between most local people and themselves, engaging people into this project. By stressing the increasing threats of flood and introducing the new engineering technologies, this project also provided a technical solution for most people in the waterfront area. In this sense, the water knowledge, the discourse of urban entrepreneurialism, the engineering technologies, and the community planning system were all parts of the urban water governance assembling process. To put it differently, the employment of practices in the water governance assemblage could be considered as the strategy

selection process of an urban hegemonic project, through which the conflicted interests between the local government and most people could thus be settled (Jessop, 1990). However, this urban hegemonic project soon encountered obstacles since the urban squatter cannot be engaged through the capital logic of real estate development. Therefore, the residents from the informal settlements made the effort to engage their existence with urban entrepreneurialism. By mobilising the features of urban informality as part of the city's cultural appeal, not only did the county government get to carry out the water governance, generating revenue from the tourist and real-estate development, but the livelihood of the residents of the informal settlements was also secured. The participation of the squatters and their efforts in the waterfront renovation project can also be conceived as the reassembling of the waterfront governance.

Having said that, the cooperation with the urban entrepreneurial project does not mean that market forces finally penetrated the local communities. The urban squatters' efforts in the renovation project did not mean that they have become the *homo economicus* that makes their decisions entirely based on the market rule, seeking the greatest economic interest from the community project. Rather, negotiating through economical terms is merely a strategy that the local communities employ to cope with the entrepreneurialising urban governance. Such a counter conducting of the community projects appears as resistance to the urban neoliberal/hydrological project. In that case, the encounter of urban informality and entrepreneurialism should not be reckoned as neoliberalism's absorption of informality. On the contrary, by tactically embracing the neoliberal ethos of urban entrepreneurialism, urban informality could

thus maintain its flexibility in its negotiation with modernity in issues like land ownership, urban planning and urban disaster management.

## **10. Conclusion: River City? Entrepreneurial City?**

This thesis offers a different take on the interweaving of urban water, new engineering methods, informality, and neoliberal ideology. By thinking of Taipei's waterfront as an assemblage, it can thus be understood as a process of the co-evolving of the urban constituent, and also the way in which this assemblage shapes each constituent. This way, each urban constituent could therefore all be taken as active and powerful in the urban formation. For instance, by thinking of the hydrological gentrification as an emergent property of Taipei's waterfront assemblage, the waterfront would therefore not only be considered as being dominated by the neoliberal force of economical development, but the power of water could also be recognised as a critical force in the making of the urban waterfront. With the movement of floods, the stink of sewerage, and the scenic view of constructed wetland, water therefore could be seen as a force in the shaping of the urban waterfront, and its transformation under the assembling process. Therefore, assemblage thinking actually provides a way to re-think to mutual constituting urban-water relation. In Taipei, before the introducing of the 'Room for the River' ethos in urban water management, managing the urban bad water was treated as the necessary precondition for the city's economic development, yet a huge burden to the city's financial situation. The dangerous and polluted waterscape was deemed unprofitable to the city. The waterfronts, under the circumstances, were often ignored by the governing authorities for having lack of economic value and being in poor condition. Such an overlooked space happened to provide a shelter for the urban subalterns; people were thus able to live in the city without being forced into the

housing or tenant market. This informality of the urban waterfront was actually the outgrowth of a long assembling process of urban development. By scrutinising this urban assemblage of the waterfront, we were thus able to revisit the formation process of Taipei Metropolitan, and the transformation that the city has currently been undergoing. With the use of the new engineering technology and new discourse in urban water governance, Taipei's waterfront has transformed into a much safer and more pleasant form in term of its appearance. This transformation also opened the door for its further incorporation within urban entrepreneurialism. This reassembling process of urban water management and urban entrepreneurialism in the end initiated a serial response to the local communities, disrupting the current dwelling relation between informal settlements and the waterfront, threatening the living of the squatters.

By recognising the capability of water, the concept of hydrological gentrification could therefore shed light on the different forms of social exclusion. In Taipei's hydrological gentrification, although eviction and displacement might not be carried out by the rising living costs that mediated through the market mechanism, it was however implemented by the change of human conception on how water should be governed. In other words, water actually takes part in facilitating this social exclusion via its engagement with neo-liberal ideology and biological engineering. This thesis therefore addresses on this conceptual change of urban water governance, and the role that neo-liberal ideology plays in the process.

Another aspect that this project has spotlighted is the heterogeneous engagement between the urban entities. In the case of Taipei's water governance, it shows that the

interaction between the urban sewerage treatment and economical reason can be drastically different with the introduction of new ecological engineering methods. Also, with the different interpretation of neo-liberal urban policy, and the strategically embracing of urban entrepreneurialism, the urban informality can therefore be re-cast to a valuable urban asset from the impediment of clear, safe urban landscape. Through the employment of assemblage theory, the unlikely engagement between different urban objects can therefore be revealed without the danger of over generalisation and too much pre-assumption. Thinking Taipei's waterfront formation as an assembling process also shines some new light onto some long-existing urban issues.

### **10.1. Banking the Bad Water**

The urban floods and the urban sewer, although they have been well discussed in urban study, are usually deemed unprofitable to the city. Even when the water works were appreciated as the spectacles of modern engineering, the human wonder of water taming (Kaika, 2005), this kind of urban infrastructures are rarely deemed as bankable to the city. However, this loss-making character of bad water is also the main reason keeping bad water and the urban waterscape from being fully integrated into the neoliberal logic of urban development. Compared to the scarce, domesticated tap water and bottled water, urban bad water appears dangerous and smelly, making it impossible to be exploited through the commodifying process that good water has come through.

The introducing of integrated water management transformed the main strategy for

urban water governance. Through the execution of the Dutch Room for the River strategy, the main strategy for the flood problem in Taipei County has been adjusted from the constructing of embankments and water pumping stations, to decreasing human habitation and other usage from the waterfronts. Together with the employment of ecological engineering, the once loathed waterfront was turned into a green, scenic urban landscape/waterscape, and initiated more opportunities for integrating with the neoliberal urbanism. In fact, the waterfront regeneration is not a new topic in the discussion of urban political economy/ecology (Quastel, 2009, Bassett et al., 2002, Wood and Handley, 1999, Bezmez, 2008). Whether it is the top-down government projects or the ones with more participation from private sectors or local communities, they are all treated as the direct involvement of neoliberal ideology for urban development, the gentrification of the urban docklands. These leave the issue of water management in this context often unattended, mainly treating it as a part of the development project. With the case of Taipei County's integrated water management, the element of water was granted more attention with respect to waterfront rehabilitation. Since the waterfront clearing out was proposed to make more room for flood detention, whilst the on-site water treatment purified the polluted urban water, the reason for the waterfront rehabilitation has become urban security. The purpose of the whole project was cast by the newly-proposed water order. This water order emphasises the significance of waterfronts, and brings more attention to the waterfront space.

What is worth noting in this case is the entwining of this water order and the neoliberal rationale. Via the clearing out of informal settlements, and the unfolding of



gravel contact oxidation processes and constructed wetlands, the prettified waterfront became more exploitable by introducing real-estate development to the neighbourhood, and even became the generator of the city's economic development. However, since the demarcating of the flood zone is conducted by the hydraulic and planning experts from the local government, this delimiting process was thus never an impartial act. In other words, this Room for the River at some level granted the local government with the unchallengeable power to determine the usage of urban waterfronts, hence the fate of the waterfront squatters was almost entirely in the hand of government bureau. This thesis however, although it acknowledges the power of flood due to its intensifying magnitude and frequency, and its increasing capability for damage, maintains that the one-sided decision-making process still implies the absolute power the urban technocrats possess over the waterfront. In other words, though the escalating of flood events does create a sense of necessity for change the current approach to flood management, the adoption of the 'Room for the River' method as the main approach was regarded as beyond discussion from the beginning of the project. The community planning here, therefore, it still treated as a top-down governing measure, fixed with the agenda of economical development, rather than being a search of new alternatives for urban water governance.

## **10.2. Hydrological Gentrification**

While the previous researches regarding waterfront regeneration have raised their concerns about gentrification (Bunce, 2009, Shenjing, 2007), the cases of the Liu-Gong Channel veteran houses and Xi-Jou tribe suggest a rather different form of

exclusion, which I have previously termed ‘hydrological gentrification’. The concept of gentrification is often used to describe the process whereby the original residents of particular areas were chased away by the rising cost of living, usually the rent, and replaced by the new comers, those who can afford the higher standard of living (Smith, 1979, Ley, 1986). In most contexts, this concept is employed to illustrate how the existing dwelling relation is disrupted by the logic of capitalism. However, in the cases of the Liu-Gong Channel veteran houses and Xi-Jou tribe, the proposal of their relocation is based on the other rationale, which is the city’s flood defence. With the discovering of the escalating and accelerating of urban floods, though the relocating projects do have some economic agenda, the legitimacy of this relocating is mainly strengthened by the hydraulic logic for urban security reasons. To put it simply, the urban dwelling relation here is no longer disrupted by only the logic of capitalism, but also the logic of hydrology. The concept of hydrological gentrification is useful in thinking the forming process of our knowledge, learning process, and practices of urban water. It offers a room to re-figure the way we conceptualise human habitats and urban water. In the case of the Xi-Jou tribe, though the dwellers have made adjustment to the threats of floods, relocating the tribe temporarily to a safer place once the flood alarm was issued, the unclear status of their ownership toward houses still considered unfit led to the absolute control over the waterfront by the County Government. The similar case of Liu-Gong Channel veteran houses also shows how urban sewerage is also a class issue. When the channel became polluted during urbanisation, every household in the neighbourhood – be it formal or not – took part in the deterioration of the channel water by releasing their own household sewer.

Given that the veteran houses were situated in the lower terrain just by the channel, the residents were even the ones being affected the most by the smell and filth the sewer brought. However, as the city became more aware of the water pollution, busy piping all the houses to the sewerage system, these informal households not only did not get to enjoy the result of this new public infrastructure, they even took the blame for the urban water pollution. This fact also points out that the informal settlements on the waterfront were only tolerated by the city due to the filth and lack of economic value of the waterfront. Once the opportunity for renovating waterfronts emerged, the informal settlements were soon considered in the way for the carrying out of public infrastructure. This relating of class and living environment can be seen as resonant with the concerns of political ecology, which stress how the environmental concern entangles with the class differences.

### **10.3. Assembling Urban Informality**

Urban informality has been widely adopted in many different contexts, mostly based in the third world cities, to characterise the unruly urbaness in the Global South (Roy and AlSayyad, 2004, Roy, 2005, McFarlane, 2012, Yeo and Heng, 2014). These forms of urban mundanity, although they cannot be fully comprehended or regulated from a juridical perspective, are actually a form of governance. Three decades after the announcement of Mayor Chen's policy that prioritised the demolition of new informal buildings, the urban informality has evolved into a mutual consent between the authority and the local people. The new buildings are at risk of being torn down if they were built without having formal licences, whereas the governing authority

cannot demolish the informal building without proper reasons, e.g. urban security, urban sustainability. The standard of this consent is, of course, always shifting, especially when the city's urban planning became influenced by the community planning system, which advocates for a more engaging planning method. The squatters and the local authorities can always negotiate for a common ground where both of their core interests are protected. For example, of all the informal buildings in Taipei County, the waterfront squatting was not the urgent issue in the past. The squatters like the Xi-Jou tribe though were reckoned as being in danger for a long time; it was the introducing of the room for water ethos that actually cast the tribe as endangering the city. The people of the tribe, through negotiating with the County Government, avoided being fully estranged from the homeland they have been living for so long. And the Taipei County Government still got to carry out its waterfront renovation plan, for the most part. This constant shifting form of urban informality cannot be captured without the insight of assemblage thinking, through which informality is treated as a process of meshing of its constituents, such as the escalating flood events, the travelling hydraulic knowledge and urban water policy, and the unfolding of community-planning system. With the employment of assemblage thinking, urban informality can thus be delineated through the negotiating process of its urban entities, and as a transformative power that shapes the urban landscape. Taking Taipei's urban informality as example, it though occurred as a tacit permission from the authoritarian regime for the constructing of informal houses, as a way to deal with the sudden demand for housing after the Chinese Civil War. This form of informality soon re-territorialised through the events of democratisation, the

prevailing of light gauge steel, and the unfolding of community-planning system. This processual thinking introduced by assemblage theory could thus offer a continuous view on the trajectory of the forming of urban informality in Taipei.

#### **10.4. Entrepreneurialising Informality, Entrepreneurialising City**

Another implication of Taipei's waterfront rehabilitation is the entwining of urban informality and entrepreneurialism. Via introducing the new water governing ethos and new engineering methods, the urban waterscape of Taipei is no longer the dirty, smelly space that was loathed by people. The urban waterfront now not only has turned into the scenic, desirable urban site that people can enjoy during their leisure time, but also it can attract the investment of real-estate development, regenerating the local economy. In this sense, this hydraulic rationale of the waterfront renovation can be understood as the technical solution that the neoliberal logic adopted for the urban waterfront, which once deemed no economic value to the city. With the visions for prosperity that the rehabilitation plan provides being so appealing, this logic of capitalism had penetrated the waterfront, and into the minds of the general citizens. In respond to this compelling neoliberal urge for development, the squatters, with the assistance from the planning experts, learnt to employ this neoliberal thinking for their own use by proposing urban informality as a part of the neoliberal urban development plan. In fact, though the informal settlements had been sheltering the urban subaltern from displacement for so long, it was usually merely as the temporal solution for the lack of housing policy since Taipei has always been so devoted to economic development. With the disarranged distribution and the coarse appearances

of the informal settlements, urban informality was once treated as an obstacle for the city to become modern, to become rationalised for the use of its space. However, with the introducing of neoliberal ideology, the city now has to redeem its uniqueness among other cities. Urban informality, under the circumstances, was thus re-figured as the cultural character of Taipei. The rustic features of the informal buildings were hence redeemed as the mark of the Global South city that denoted a different developing path from the Anglo cities. This is to say, the urban informality of Taipei, with its entwining with neoliberal ideology, had become a valuable prop for the city's seeking of further development in real-estate and tourism. The cases of Taipei's waterfront renovation exhibited the neoliberalisation of the city. It epitomises the unrolling of neoliberalism's core value: Governing the society through market (Foucault, 2008). In Taipei's case, the waterfront was deemed worthy of renovating largely owing to the economical value this plan may bring; also, the urban informality was considered worthy of staying mainly for the reason that the informality was compatible with the city's development. This intertwining of urban water governance, urban informality, and neoliberal rationale not only offers an outlook for the neoliberalisation of the city, but more importantly, it also provides a viewpoint on how the neoliberal rationale was interpreted, practised, and lived through its mutation.

### **10.5. The Hope for Resistance? Counter-Conducting the Neoliberal Logic**

The entrepreneurialising of urban informality also brings out another issue -- the resistance to such neoliberalisation. At the first glance, the local communities of the Liu-Gong veteran houses and the Xi-Jou tribe seem overwhelmed by the neoliberal

logic. With the mediation of community-planning system, the residents actively participate in the transformation of waterfronts, incorporating themselves into these entrepreneurial projects, turning themselves into the cultural attractions of the city. With neoliberalism being so compelling to the city, the verdict of markets being applied to all aspects of urban lives, it seems impossible to withstand this neoliberal urbanism. Having said that, the cases of Xi-Jou tribe and Liu-Gong veteran houses indicate that there is still room for resistance. Both of these cases show that though the residents did comply with the demand for waterfront renovation from the local authority, and even blended themselves into this urban water project, they still maintain their critical view on this waterfront regeneration plan. As shown in the interviews in chapter 9, the squatters involved in the renovation plan though actively propose to turn themselves into cultural attractions, they remain perfectly aware that this is only for the purpose of keeping their existing ways of lives, not for seeking further economic reward. This technical mingling with neoliberal urban development can be put in the context of government and resistance. In Death (2010) work on protests and dissents, he excavates Foucault's notion of 'counter-conduct' further to sort out the relation of power and resistance. Since Foucault held a diffuse view toward power, which is embedded in the web of relations, instead of particular agents; it is to be found through the examination of practices and rationalities, rather than treated as possessed by the agents. In this sense, the resistance should not be perceived through the movements and protests, but through the practices and mentalities that perform '*the art of not being governed quite so much*' (Foucault et al., 2007, p. 45). As he further argued:

*'I do not mean by that that governmentalization would be opposed by a kind of face- off by the opposite affirmation, "We do not want to be governed and we do not want to be governed at all". I mean that, in this great preoccupation about the way to govern and the search for the ways to govern, we identify a perpetual question which would be: "How not to be governed like that, by that, in the name of those principles, with such and such an objective in mind and by means of such procedures, not like that, not for that, not by them"' (p. 44).*

In the case of Taipei's waterfront renovation, though the people affected by the neoliberal governance may behave like the ones with neoliberal mentality, even actively participating in the negotiation process with the governing authority, their mentality keeps some level of autonomy from the market rule, in refusing to view their houses as the assets to be maximised with their economic value via integrating unreservedly to the waterfront renovation project. This concept of counter-conduct is thus able to initiate a different imagination toward the relation of power and resistance, government and freedom.

## **10.6. Conclusion**

This chapter by now has gone through individually how this project shed new light on the thinking of urban water, informality, entrepreneurialism, and community planning system. In the end of this thesis, I would like to further stress the significance of thinking city in a processual manner. By employing assemblage theory, the city can be seen as a socio-natural assemblage in which each component of political force, economic rationale, and physical environment reveal their capacity for transforming



the whole urban assemblage. The urban water governance therefore should also be perceived as the practices that are employed to facilitate this assemblage. With assemblage thinking being adopted in the delineation of urban water governance, the urban waterscape can thus be treated as the constellation of layer after layer of incidents, the mediation of new hydraulic knowledge, the progressing of engineering, the producing of discourses, and the interpreting of the information. This way, the things and objects can be conceived as more than just a generic concept such as modern water or neoliberalism. Rather, they can be seen for their processual influence on the shaping of the city, the ways they interact with each other, and evolve as the city develops. This processual perspective on the formation of things enables a dispersive imagine of power. Instead of trying to convict the prime suspect that is causing the inequality, this dispersive imagine of power offers an alternative view on the collective creation of urban inequality, and initiates more possibilities for solving it. As in the case of the entrepreneurialising of urban informality, the communities of the Liu-Gong channel and the Xi-Jou tribe managed to counter-conduct the renovation project of their neighbourhoods, and negotiated with local governance through the community planning system. Through viewing the formation of problem in a more processual way, there would thus be more room opened up for dealing with the inequality, restoring the power balance little by little during this process.

## 11. References

- ABU-LUGHOD, J. 1975. The Legitimacy of Comparisons in Comparative Urban Studies A Theoretical Position and an Application to North African Cities. *Urban Affairs Review*, 11, 13-35.
- ADGER, W. N. 2000. Social and ecological resilience: are they related? *Progress in Human Geography*, 24, 347-364.
- ADGER, W. N., HUGHES, T. P., FOLKE, C., CARPENTER, S. R. & ROCKSTRÖM, J. 2005. Social-Ecological Resilience to Coastal Disasters. *Science*, 309, 1036-1039.
- AGAMBEN, G. 1998. *Homo sacer: Sovereign power and bare life*, Stanford University Press.
- ALLEN, J. 2011. Powerful assemblages? *Area*, 43, 154-157.
- ALSAYYAD, N. 2004. *Urban Informality: Transnational Perspectives from the Middle East, Latin America, and South Asia*, Lexington Books.
- ALSAYYAD, N. & ROY, A. 2006. Medieval modernity: on citizenship and urbanism in a global era. *Space & Polity*, 10, 1-20.
- AMIN, A. & COHENDET, P. 2004. *Architectures of knowledge: Firms, capabilities, and communities*, Oxford University Press.
- AMIN, A. & GRAHAM, S. 1997. The Ordinary City. *Transactions of the Institute of British Geographers*, 22, 411-429.
- AMIN, A. & THRIFT, N. 2002. *Cities: reimagining the urban*, Polity Press.
- ANDERSON, B., KEARNES, M., MCFARLANE, C. & SWANTON, D. 2012a. Materialism and the politics of assemblage. *Dialogues in Human Geography*, 2, 212-215.
- ANDERSON, B., KEARNES, M., MCFARLANE, C. & SWANTON, D. 2012b. On assemblages and geography. *Dialogues in Human Geography*, 2, 171-189.
- ANDERSON, B. & MCFARLANE, C. 2011. Assemblage and geography. *Area*, 43, 124-127.
- APPADURAI, A. 2000. Grassroots globalization and the research imagination. *Public culture*, 12, 1-19.
- ASH, J. 2013. Rethinking affective atmospheres: Technology, perturbation and space times of the non-human. *Geoforum*, 49, 20-28.

- BAKKER, K. 2013a. Constructing 'public' water: the World Bank, urban water supply, and the biopolitics of development. *Environment and Planning D: Society and Space*, 31, 280-300.
- BAKKER, K. 2013b. Neoliberal Versus Postneoliberal Water: Geographies of Privatization and Resistance. *Annals of the Association of American Geographers*, 103, 253-260.
- BAKKER, K. J. 2004. *An uncooperative commodity : privatizing water in England and Wales*, Oxford ; New York, Oxford University Press.
- BASSETT, K., GRIFFITHS, R. & SMITH, I. 2002. Testing Governance: Partnerships, Planning and Conflict in Waterfront Regeneration. *Urban Studies*, 39, 1757-1775.
- BAYAT, A. 1997. *Street politics: poor people's movements in Iran*, Columbia University Press.
- BEAVERSTOCK, J. V., SMITH, R. G. & TAYLOR, P. J. 1999. A roster of world cities. *Cities*, 16, 445-458.
- BEAVERSTOCK, J. V., SMITH, R. G. & TAYLOR, P. J. 2000. World-City Network: A New Metageography? *Annals of the Association of American Geographers*, 90, 123-134.
- BEZMEZ, D. 2008. The Politics of Urban Waterfront Regeneration: The Case of Haliç (the Golden Horn), Istanbul. *International Journal of Urban and Regional Research*, 32, 815-840.
- BIRKMANN, J., GARSCHAGEN, M., KRAAS, F. & NGUYEN, Q. 2010. Adaptive urban governance: new challenges for the second generation of urban adaptation strategies to climate change. *Sustainability Science*, 5, 185-206.
- BRAUN, B. 2008. Environmental issues: inventive life. *Progress in Human Geography*, 32, 667-679.
- BRENNER, N. 2003. *State/Space: A Reader*, Wiley.
- BRENNER, N. 2004. *New state spaces: urban governance and the rescaling of statehood*, Oxford University Press, USA.
- BRENNER, N., MADDEN, D. J. & WACHSMUTH, D. 2011. Assemblage urbanism and the challenges of critical urban theory. *City*, 15, 225-240.
- BRENNER, N., PECK, J. & THEODORE, N. I. K. 2010. Variegated neoliberalization: geographies, modalities, pathways. *Global Networks*, 10, 182-222.
- BRENNER, N. & THEODORE, N. 2002a. Cities and the Geographies of Actually

- Existing Neoliberalism. *Antipode*, 34, 349-379.
- BRENNER, N. & THEODORE, N. 2002b. Preface: From the "New Localism" to the Spaces of Neoliberalism. *Antipode*, 34, 341-347.
- BRENNER, N. & THEODORE, N. 2005. Neoliberalism and the urban condition. *City*, 9, 101-107.
- BRYANT, L., SRNICEK, N. & HARMAN, G. 2011. Towards a speculative philosophy. *The Speculative Turn: Continental Materialism and Realism*, 1-18.
- BUNCE, S. 2009. Developing sustainability: sustainability policy and gentrification on Toronto's waterfront. *Local Environment*, 14, 651-667.
- BUNNELL, T. & HARRIS, A. 2012. Re-viewing informality: perspectives from urban Asia. *International Development Planning Review*, 34, 339-348.
- BUTLER, T. & HAMNETT, C. 1994. Gentrification, class, and gender: some comments on Warde's 'Gentrification as consumption'. *Environment and Planning D: Society and Space*, 12, 477-493.
- CAULFIELD, J. 1989. 'Gentrification' and desire. *Canadian Review of Sociology/Revue canadienne de sociologie*, 26, 617-632.
- CHAKRABARTY, D. 2009. *Provincializing Europe: Postcolonial Thought and Historical Difference (New Edition)*, Princeton University Press.
- CHANG, D. W. 1965. U.S. Aid and Economic Progress in Taiwan. *Asian Survey*, 5, 152-160.
- CHEN, H.-C. 2011. A historical Research on the 'Urban Planning Act' Presented by Urban and Housing Committee (UHDC) and U.N. Advisor Group. *Journal of Environment and Art*, 9, 47-67.
- CHEN, Y.-L. 2010. Neoliberalization, State and Housing Market: Transformation of Public Housing Policies in Taiwan. *Journal of Geographical Science*, 59, 105-131.
- CLARKE, J. 2008. Living with/in and without neo-liberalism. *Focaal*, 2008, 135-147.
- CLARKE, N. 2012. Actually Existing Comparative Urbanism: Imitation and Cosmopolitanism in North-south Interurban Partnerships. *Urban Geography*, 33, 796-815.
- COHEN, A. & BAKKER, K. 2014. The eco-scalar fix: rescaling environmental governance and the politics of ecological boundaries in Alberta, Canada. *Environment and Planning D: Society and Space*, 32, 128-146.
- COOK, I. R. & WARD, K. 2012. Relational Comparisons: The Assembling of Cleveland's Waterfront Plan. *Urban Geography*, 33, 774-795.

- CRESSWELL, T. 2012. *Geographic thought: a critical introduction*, John Wiley & Sons.
- DAVIES, M. 2006. *Planet of slums*. Verso, London.
- DE SOTO, H. 2000. *The mystery of capital: Why capitalism succeeds in the West and fails everywhere else*. New York: Basic Books.
- DEATH, C. 2010. Counter-conducts: A Foucauldian Analytics of Protest. *Social Movement Studies*, 9, 235-251.
- DELANDA, M. 2006. *A new philosophy of society: Assemblage theory and social complexity*, Continuum.
- DELANDA, M. 2010. *Deleuze: History and science*, Atropos.
- DELEUZE, G. & GUATTARI, F. I. 2004. *Anti-oedipus*, Continuum.
- DOOLING, S. 2009. Ecological gentrification: A research agenda exploring justice in the city. *International Journal of Urban and Regional Research*, 33, 621-639.
- DOVEY, K. 2011. Uprooting critical urbanism. *City*, 15, 347-354.
- DOVEY, K. 2012. Informal urbanism and complex adaptive assemblage. *International Development Planning Review*, 34, 349-368.
- DOVEY, K. & KING, R. 2011. Forms of informality: morphology and visibility of informal settlements. *Built Environment*, 37, 11-29.
- EKERS, M. & LOFTUS, A. 2008. The power of water: developing dialogues between Foucault and Gramsci. *Environment and planning. D, Society and space*, 26, 698.
- FARIÁS, I. 2011. The politics of urban assemblages. *City*, 15, 365-374.
- FARIAS, I. & BENDER, T. 2010. *Urban assemblages : how actor-network theory changes urban studies*, London ; New York, Routledge.
- FLORIDA, R. L. 2002. *The rise of the creative class: and how it's transforming work, leisure, community and everyday life*, Basic books.
- FLORIDA, R. L. 2005. *Cities and the creative class*, Psychology Press.
- FOUCAULT, M. 2008. The Birth of Biopolitics: Lectures at the College de France 1978–1979, trans. *Graham Burchell: Houndsmill, UK: Palgrave Macmillan*.
- FOUCAULT, M. 2009. *Security, Territory, Population: Lectures at the College de France 1977--1978*, Picador USA.
- FOUCAULT, M., LOTRINGER, S., HOCHROTH, L. & PORTER, C. 2007. *The politics of truth*, Semiotext (e) New York.
- FRIEDMANN, J. 1986. The world city hypothesis. *Development and change*, 17, 69-83.

- GANDY, M. 1999. The Paris Sewers and the Rationalization of Urban Space. *Transactions of the Institute of British Geographers*, 24, 23-44.
- GANDY, M. 2003. *Concrete and clay: reworking nature in New York City*, MIT Press.
- GANDY, M. 2005. Cyborg urbanization: complexity and monstrosity in the contemporary city. *International Journal of Urban and Regional Research*, 29, 26-49.
- GEERTZ, C. 1993. *The Interpretation of Cultures*, London, Fontana Press.
- GHERTNER, D. A. 2008. Analysis of new legal discourse behind Delhi's slum demolitions. *Economic and Political Weekly*, 57-66.
- GIDWANI, V. K. 2008. *Capital, interrupted: Agrarian development and the politics of work in India*, U of Minnesota Press.
- GRAHAM, S. & MARVIN, S. 2001. *Splintering urbanism : networked infrastructures, technological mobilities and the urban condition*, London ; New York, Routledge.
- GREENHOUGH, B. 2012. On the agencement of the academic geographer. *Dialogues in Human Geography*, 2, 202-206.
- GUHA, R. 1988. On some aspects of the historiography of colonial India. In: GUHA, R. & SPIVAK, G. C. (eds.) *Selected subaltern studies*. New York: Oxford University Press.
- HAJER, M. A. 1997. *The politics of environmental discourse: ecological modernization and the policy process*, Oxford University Press.
- HALL, A. 1974. Patron - client relations.
- HALL, P. & PFEIFFER, U. 2000. Urban Future 21—a global agenda for twenty-first century cities. *London/New York*.
- HALL, T. & HUBBARD, P. 1996. The entrepreneurial city: new urban politics, new urban geographies? *Progress in Human Geography*, 20, 153-174.
- HANSEN, K. T. & VAA, M. 2004. *Reconsidering informality: Perspectives from urban Africa*, Nordic Africa Institute.
- HARMAN, G. 2002. *Tool-being : Heidegger and the metaphysics of objects*, Chicago, Open Court.
- HARMAN, G. 2008. DeLanda's ontology: assemblage and realism. *Continental philosophy review*, 41, 367-383.
- HARMAN, G. 2009. *Prince of networks: Bruno Latour and metaphysics*, Prahran, Vic.: Re. press, 2009.

- HARMAN, G. 2011a. On the undermining of objects: Grant, Bruno, and radical philosophy. *The Speculative Turn: Continental Materialism and Realism*, 21-40.
- HARMAN, G. 2011b. *The quadruple object*, Winchester, U.K. ; Washington, D.C., Zero Books.
- HARRIS, A. 2008. From London to Mumbai and Back Again: Gentrification and Public Policy in Comparative Perspective. *Urban Studies*, 45, 2407-2428.
- HARRIS, A. & MOORE, S. 2013. Planning Histories and Practices of Circulating Urban Knowledge. *International Journal of Urban and Regional Research*, 37, 1499-1509.
- HARVEY, D. 1989. From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism. *Geografiska Annaler. Series B, Human Geography*, 71, 3-17.
- HARVEY, D. 2003. *Paris, Capital of Modernity*, Taylor & Francis.
- HARVEY, D. 2005. *A brief history of neoliberalism*, Oxford University Press, USA.
- HEYENEN, N., KAIKA, M. & SWYNGEDOUW, E. 2006. Urban political ecology. *In the nature of cities: urban political ecology and the politics of urban metabolism*, 1.
- HOFFMAN, D. 2007. The city as barracks: Freetown, Monrovia, and the organization of violence in postcolonial African cities. *Cultural Anthropology*, 22, 400-428.
- HOLSTON, J. 2008. *Insurgent citizenship: Disjunctions of democracy and modernity in Brazil*, Princeton University Press.
- HSIEH, M.-J. 2001. The development of Taiwan's Iron and Steel Industry. *In*: FOUNDATION, N. P. (ed.) *NPF Research Report*.
- HSU, J.-Y. 2009. The spatial encounter between neoliberalism and populism in Taiwan: Regional restructuring under the DPP regime in the new millennium. *Political Geography*, 28, 296-308.
- HUANG, L.-L. & HSU, J.-Y. 2011. From Cultural Building, Economic Revitalization to Local Partnership? The Changing Nature of Community Mobilization in Taiwan. *International Planning Studies*, 16, 131-150.
- HUANG, S.-Q. 1997. *Green bulldozer : The squatters, parks, nature estate and institutionalized landscape in 90's Taipei*.
- HUYSEN, A. 2008. *Other cities, other worlds: urban imaginaries in a globalizing age*, Duke University Press.
- JACOBS, J. M. 2012. Commentary—Comparing Comparative Urbanisms. *Urban*

- Geography*, 33, 904-914.
- JESSOP, B. 2002. *The future of the capitalist state*, Cambridge, UK  
Malden, MA, Polity ;  
Distributed in the USA by Blackwell Pub.
- JESSOP, B. 2007. New Labour or The Normalization of Neo-Liberalism? *British Politics*, 2, 282-288.
- JESSOP, B., BRENNER, N. & JONES, M. 2008. Theorizing sociospatial relations. *Environment and planning. D, Society and space*, 26, 389.
- JESSOP, B. & SUM, N.-L. 2000. An Entrepreneurial City in Action: Hong Kong's Emerging Strategies in and for (Inter)Urban Competition. *Urban Studies*, 37, 2287-2313.
- JOHNSON, C., PENNING-ROWSELL, E. & PARKER, D. 2007. Natural and imposed injustices: the challenges in implementing 'fair' flood risk management policy in England. *Geographical Journal*, 173, 374-390.
- KAIKA, M. 2004. Interrogating the geographies of the familiar: domesticating nature and constructing the autonomy of the modern home. *International Journal of Urban and Regional Research*, 28, 265-286.
- KAIKA, M. 2005. *City of flows : modernity, nature, and the city*, New York, Routledge.
- KAIKA, M. & SWYNGEDOUW, E. 2000. Fetishizing the modern city: the phantasmagoria of urban technological networks. *International Journal of Urban and Regional Research*, 24, 120-138.
- KIPFER, S. & KEIL, R. 2002. Toronto Inc? Planning the competitive city in the new Toronto. *Antipode*, 34, 227-264.
- LANE, S. N., ODONI, N., LANDSTRÖM, C., WHATMORE, S. J., WARD, N. & BRADLEY, S. 2011. Doing flood risk science differently: an experiment in radical scientific method. *Transactions of the Institute of British Geographers*, 36, 15-36.
- LARNER, W. 2000. Neo-liberalism: Policy, ideology, governmentality. *Studies in political economy*, 63.
- LARNER, W. 2003. Neoliberalism? *Environment and planning D*, 21, 509-512.
- LARNER, W., HERON, R. L. & LEWIS, N. 2007. Co - Constituting "After Neoliberalism": Political Projects and Globalizing Governmentalities in Aotearoa/New Zealand. *Neoliberalization: States, networks, peoples*, 223-247.
- LATOUR, B. 1993. *We have never been modern*, Cambridge, Mass., Harvard



- University Press.
- LATOUR, B. 2005. *Reassembling the social : an introduction to actor-network-theory*, Oxford ; New York, Oxford University Press.
- LATOUR, B., HARMAN, G. & ERDELYI, P. 2011. *The prince and the wolf : Latour and Harman at the LSE*, Winchester, Zero.
- LEES, L. 2000. A reappraisal of gentrification: towards a geography of gentrification. *Progress in Human Geography*, 24, 389.
- LEES, L. 2003a. The ambivalence of diversity and the politics of urban renaissance: the case of youth in downtown Portland, Maine. *International Journal of Urban and Regional Research*, 27, 613-634.
- LEES, L. 2003b. Policy (re) turns: gentrification research and urban policy--urban policy and gentrification research. *Environment and Planning A*, 35, 571-574.
- LEES, L. 2003c. Super-gentrification: the case of Brooklyn Heights, New York City. *Urban Studies*, 40, 2487-2509.
- LEES, L. 2008. Gentrification and social mixing: towards an inclusive urban renaissance? *Urban Studies*, 45, 2449.
- LEES, L. 2012. The geography of gentrification: Thinking through comparative urbanism. *Progress in Human Geography*, 36, 155-171.
- LEGG, S. 2011. Assemblage/apparatus: using Deleuze and Foucault. *Area*, 43, 128-133.
- LEY, D. 1980. Liberal Ideology and the Postindustrial City. *Annals of the Association of American Geographers*, 70, 238-258.
- LEY, D. 1986. Alternative Explanations for Inner-City Gentrification: A Canadian Assessment. *Annals of the Association of American Geographers*, 76, 521-535.
- LEY, D. 1997. *The New Middle Class and the Remaking of the Central City*, Oxford University Press.
- LI, K.-C. 1996. From Sojourners to Settlers--A Circumstantial Study of the Making of Mainlanders as an Ethnic Group in Contemporary Taiwan. *Journal of Culture and Society*, 3, 367-390.
- LI, T.-M. 1970. The population composition and distribution of the mainlanders in Taiwan. *Taipei Historical Documents Quarterly*, 11, 62-86.
- LIN, G. C. S. 2007. Chinese Urbanism in Question: State, Society, and the Reproduction of Urban Spaces. *Urban Geography*, 28, 7-29.
- LIN, T. Y. 2006. *The Study on Handling Model of Squatter in Cities around Taiwan-Taipei as an Example*.

- LINTON, J. 2010. *What is water? : the history of a modern abstraction*, Vancouver, UBC Press.
- LOFTUS, A. 2006. Reification and the Dictatorship of the Water Meter. *Antipode*, 38, 1023-1045.
- LOFTUS, A. 2007. Working the Socio-Natural Relations of the Urban Waterscape in South Africa. *International Journal of Urban and Regional Research*, 31, 41-59.
- LOFTUS, A. 2009a. Intervening in the environment of the everyday. *Geoforum*, 40, 326-334.
- LOFTUS, A. 2009b. Rethinking Political Ecologies of Water. *Third World Quarterly*, 30, 953-968.
- LOFTUS, A. & LUMSDEN, F. 2008. Reworking hegemony in the urban waterscape. *Transactions of the Institute of British Geographers*, 33, 109-126.
- LORIMER, J. 2010. Moving image methodologies for more-than-human geographies. *cultural geographies*, 17, 237-258.
- MACLEOD, G. 2002. From urban entrepreneurialism to a “revanchist city”? On the spatial injustices of Glasgow’s renaissance. *Antipode*, 34, 602-624.
- MALONEY, W. F. 2004. Informality Revisited. *World Development*, 32, 1159-1178.
- MARSTON, S. A., JONES, J. P. & WOODWARD, K. 2005. Human geography without scale. *Transactions of the Institute of British Geographers*, 30, 416-432.
- MASSEY, D. B. 2005. *For space*, London ; Thousand Oaks, Calif., SAGE.
- MASSEY, D. B. 2007. *World city*, Malden, MA, Polity Press.
- MCCANN, E. 2011. Veritable inventions: cities, policies and assemblage. *Area*, 43, 143-147.
- MCCANN, E. & WARD, K. 2011. *Mobile urbanism : cities and policymaking in the global age*, Minneapolis, University of Minnesota Press.
- MCCANN, E. J. 2008. Expertise, truth, and urban policy mobilities: global circuits of knowledge in the development of Vancouver, Canada's 'four pillar' drug strategy. *Environment and Planning A*, 40, 885-904.
- MCFARLANE, C. 2006. Crossing borders: development, learning and the North – South divide. *Third World Quarterly*, 27, 1413-1437.
- MCFARLANE, C. 2008. Urban Shadows: Materiality, the ‘Southern City’ and Urban Theory. *Geography Compass*, 2, 340-358.
- MCFARLANE, C. 2010. The Comparative City: Knowledge, Learning, Urbanism.

- International Journal of Urban and Regional Research*, 34, 725-742.
- MCFARLANE, C. 2011a. Assemblage and critical urbanism. *City*, 15, 204-224.
- MCFARLANE, C. 2011b. The city as assemblage: dwelling and urban space. *Environment and Planning D-Society & Space*, 29, 649-671.
- MCFARLANE, C. 2011c. *Learning the city: Knowledge and translocal assemblage*, Wiley-Blackwell.
- MCFARLANE, C. 2011d. On context. *City*, 15, 375-388.
- MCFARLANE, C. 2012. Rethinking Informality: Politics, Crisis, and the City. *Planning Theory & Practice*, 13, 89-108.
- MCFARLANE, C. & ANDERSON, B. 2011. Thinking with assemblage. *Area*, 43, 162-164.
- MCFARLANE, C. & ROBINSON, J. 2012. Introduction—Experiments in Comparative Urbanism. *Urban Geography*, 33, 765-773.
- MCFARLANE, C. & WAIBEL, C. M. F. M. 2012. *Urban Informalities: Reflections on the Formal and Informal*, Ashgate Publishing Company.
- MEEHAN, K., SHAW, I. G. R. & MARSTON, S. A. 2013. Political geographies of the object. *Political Geography*, 33, 1-10.
- MINNERY, J., STOREY, D. & SETYONO, J. 2012. Lost in Translation? Comparing Planning Responses to Urban Growth in the Global North and South. *Urban Geography*, 33, 850-865.
- MOL, A. P. J. & SONNENFELD, D. A. 2000. Ecological modernisation around the world: An introduction. *Environmental Politics*, 9, 1-14.
- MURDOCH, J. 2006. *Post-structuralist geography: a guide to relational space*, London, Sage Publications Limited.
- MURRAY LI, T. 2007. Practices of assemblage and community forest management. *Economy and Society*, 36, 263-293.
- NIJMAN, J. 2007. Introduction—Comparative Urbanism. *Urban Geography*, 28, 1-6.
- ONG, A. 2006. *Neoliberalism as exception: Mutations in citizenship and sovereignty*, Duke University Press.
- ONG, A. 2007. Neoliberalism as a mobile technology. *Transactions of the Institute of British Geographers*, 32, 3-8.
- PECK, J. 2001. Neoliberalizing states: thin policies/hard outcomes. *Progress in Human Geography*, 25, 445.
- PECK, J., THEODORE, N. & BRENNER, N. 2009. Neoliberal urbanism: models, moments, mutations. *Sais Review*, 29, 49-66.

- PECK, J. & TICKELL, A. 1994. Jungle Law Breaks out: Neoliberalism and Global-Local Disorder. *Area*, 26, 317-326.
- PECK, J. & TICKELL, A. 2002. Neoliberalizing Space. *Antipode*, 34, 380-404.
- PHILLIPS, J. 2006. Agencement/assemblage. *Theory, Culture & Society*, 23, 108-109.
- QUASTEL, N. 2009. Political Ecologies of Gentrification. *Urban Geography*, 30, 694-725.
- RACO, M. 2003. Remaking Place and Securitising Space: Urban Regeneration and the Strategies, Tactics and Practices of Policing in the UK. *Urban Studies*, 40, 1869-1887.
- RACO, M. 2005. Sustainable Development, Rolled-out Neoliberalism and Sustainable Communities. *Antipode*, 37, 324-347.
- RACO, M. & IMRIE, R. 2000. Governmentality and rights and responsibilities in urban policy. *Environment and Planning A*, 32, 2187-2204.
- RACO, M., IMRIE, R. O. B. & LIN, W.-I. 2011. Community Governance, Critical Cosmopolitanism and Urban Change: Observations from Taipei, Taiwan. *International Journal of Urban and Regional Research*, 35, 274-294.
- RANKIN, K. N. 2011. Assemblage and the politics of thick description. *City*, 15, 563-569.
- ROBINSON, J. 2002. Global and world cities: a view from off the map. *International Journal of Urban and Regional Research*, 26, 531-554.
- ROBINSON, J. 2003. Postcolonialising Geography: Tactics and Pitfalls. *Singapore Journal of Tropical Geography*, 24, 273-289.
- ROBINSON, J. 2004. In the tracks of Comparative Urbanism: Difference, Urban Modernity and the Primitive. *Urban Geography*, 25, 709-723.
- ROBINSON, J. 2005. Urban geography: world cities, or a world of cities. *Progress in Human Geography*, 29, 757-765.
- ROBINSON, J. 2006. *Ordinary cities: between modernity and development*, Routledge.
- ROBINSON, J. 2011a. Cities in a World of Cities: The Comparative Gesture. *International Journal of Urban and Regional Research*, 35, 1-23.
- ROBINSON, J. D. 2011b. The Spaces of Circulating Knowledge.
- ROFE, M. W. 2003. 'I Want to be Global': Theorising the Gentrifying Class as an Emergent Elite Global Community. *Urban Studies*, 40, 2511.
- ROSE, N. 1996. Governing "advanced" liberal democracies. *The Anthropology of the State: a reader*, 144-162.

- ROSE, N. 1999. *Powers of freedom: Reframing political thought*, Cambridge university press.
- ROY, A. 2005. Urban Informality: Toward an Epistemology of Planning. *Journal of the American Planning Association*, 71, 147-158.
- ROY, A. 2009a. The 21st-Century Metropolis: New Geographies of Theory. *Regional Studies*, 43, 819 - 830.
- ROY, A. 2009b. Strangely Familiar: Planning and the Worlds of Insurgence and Informality. *Planning Theory*, 8, 7-11.
- ROY, A. 2009c. Why India Cannot Plan Its Cities: Informality, Insurgence and the Idiom of Urbanization. *Planning Theory*, 8, 76-87.
- ROY, A. 2011. Slumdog cities: rethinking subaltern urbanism. *International Journal of Urban and Regional Research*, 35, 223-238.
- ROY, A. & ALSAYYAD, N. 2004. *Urban informality : transnational perspectives from the Middle East, Latin America, and South Asia*, Lanham, Md. Berkeley, Calif., Lexington Books ; Center for Middle Eastern Studies, University of California at Berkeley.
- RYLE 1971. *Collected Papers*, London, Hutchinson.
- SALDANHA, A. 2012. Assemblage, materiality, race, capital. *Dialogues in Human Geography*, 2, 194-197.
- SASSEN, S. 2001. *The Global City: New York, London, Tokyo*, Princeton University Press.
- SAVINI, F. 2011. The Endowment of Community Participation: Institutional Settings in Two Urban Regeneration Projects. *International Journal of Urban and Regional Research*, 35, 949-968.
- SAYER, A. 1992. *Method in social science: A realist approach*, Psychology Press.
- SHAW, I. G. R. 2012. Towards an evental geography. *Progress in Human Geography*, 36, 613-627.
- SHAW, I. G. R. & MEEHAN, K. 2013. Force-full: power, politics and object-oriented philosophy. *Area*, 45, 216-222.
- SHENJING, H. 2007. State-sponsored Gentrification Under Market Transition The Case of Shanghai. *Urban Affairs Review*, 43, 171-198.
- SHORT, J. R., KIM, Y., KUUS, M. & WELLS, H. 1996. The dirty little secret of world cities research: Data problems in comparative analysis. *International Journal of Urban and Regional Research*, 20, 697-&.
- SLATER, T. 2006. The eviction of critical perspectives from gentrification research.

- International Journal of Urban and Regional Research*, 30, 737-757.
- SMITH, N. 1979. Toward a theory of gentrification a back to the city movement by capital, not people. *Journal of the American Planning Association*, 45, 538-548.
- SMITH, N. 1987. Gentrification and the Rent Gap. *Annals of the Association of American Geographers*, 77, 462-465.
- SMITH, N. 1992. Geography, difference and the politics of scale. *Postmodernism and the social sciences*, 57-79.
- SMITH, N. 1996. *The new urban frontier: gentrification and the revanchist city*, Psychology Press.
- SMITH, N. 2002. New globalism, new urbanism: gentrification as global urban strategy. *Antipode*, 34, 427-450.
- SMITH, R. G. 2013. The ordinary city trap. *Environment and Planning A*, 45, 2290-2304.
- SOJA, E. W. 1996. *Thirdspace: Journeys to Los Angeles and other real-and-imagined places*, Blackwell Oxford.
- SOLIMAN, A. 2010. Rethinking urban informality and the planning process in Egypt. *International Development Planning Review*, 32, 119-143.
- SOLIMAN, A. & SOTO, H. D. 2004. *A possible way out : formalizing housing informality in Egyptian cities*, Lanham, Md., University Press of America.
- STEWART, K. 2007. *Ordinary affects*, Duke University Press.
- SU-JAN, Y., LIMIN, H. & KIANG, H. C. 2012. Urban informality and everyday (night) life: a field study in Singapore. *International Development Planning Review*, 34, 369-390.
- SWANTON, D. 2010. Flesh, metal, road: tracing the machinic geographies of race. *Environment and planning. D, Society and space*, 28, 447.
- SWYNGEDOUW, E. 1996. The city as a hybrid: On nature, society and cyborg urbanization. *Capitalism Nature Socialism*, 7, 65-80.
- SWYNGEDOUW, E. 1999. Modernity and Hybridity: Nature, Regeneracionismo, and the Production of the Spanish Waterscape, 1890–1930. *Annals of the Association of American Geographers*, 89, 443-465.
- SWYNGEDOUW, E. 2004. *Social power and the urbanization of water : flows of power*, Oxford ; New York, Oxford University Press.
- SWYNGEDOUW, E. 2006a. Circulations and metabolisms: (Hybrid) Natures and (Cyborg) cities. *Science as Culture*, 15, 105-121.

- SWYNGEDOUW, E. 2006b. Metabolic urbanization: the making of cyborg cities. *In the Nature of Cities*. New York: Routledge.
- SWYNGEDOUW, E. 2007. Technonatural revolutions: the scalar politics of Franco's hydro-social dream for Spain, 1939–1975. *Transactions of the Institute of British Geographers*, 32, 9-28.
- SWYNGEDOUW, E. 2009. The Political Economy and Political Ecology of the Hydro-Social Cycle. *Journal of Contemporary Water Research & Education*, 142, 56-60.
- SWYNGEDOUW, E. 2013. Into the Sea: Desalination as Hydro-Social Fix in Spain. *Annals of the Association of American Geographers*, 103, 261-270.
- SWYNGEDOUW, E., MOULAERT, F. & RODRIGUEZ, A. 2002. Neoliberal Urbanization in Europe: Large Scale Urban Development Projects and the New Urban Policy. *Antipode*, 34, 542-577.
- TAYLOR, P. J. 1997. Hierarchical tendencies amongst world cities: a global research proposal. *Cities*, 14, 323-332.
- TAYLOR, P. J. 2003a. Generating Data for Research on Cities in Globalization. *In*: BORSDORF, A. & PARNREITER, C. (eds.) *International Research on Metropolises: Milestones and Frontiers*. Vienna: Verlag der Österreichischen Akademie der Wissenschaften.
- TAYLOR, P. J. 2003b. *World city network: a global urban analysis*, Routledge.
- THEODORE, N., PECK, J. & BRENNER, N. 2011. Neoliberal Urbanism: Cities and the Rule of Markets. *The New Blackwell Companion to the City*. Wiley-Blackwell.
- THOMAS, D. S. G. & TWYMAN, C. 2006. Adaptation and equity in resource dependent societies. *Fairness in adaptation to climate change*, 223-228.
- TSAI, M.-C. 2001. Dependency, the State and Class in the Neoliberal Transition of Taiwan. *Third World Quarterly*, 22, 359-379.
- TSING, A. 2000. The global situation. *Cultural anthropology*, 327-360.
- TURNER, J. C. 1968. Housing Priorities, Settlement Patterns, and Urban Development in Modernizing Countries. *Journal of the American Institute of Planners*, 34, 354-363.
- WALEY, P. 2012. Japanese Cities in Chinese Perspective: Towards a Contextual, Regional Approach to Comparative Urbanism. *Urban Geography*, 33, 816-828.
- WALLACE, A. 2010. New Neighbourhoods, New Citizens? Challenging

- ‘Community’ as a Framework for Social and Moral Regeneration under New Labour in the UK. *International Journal of Urban and Regional Research*, 34, 805-819.
- WARD, P. J., PAUW, W. P., VAN BUUREN, M. W. & MARFAI, M. A. 2012. Governance of flood risk management in a time of climate change: the cases of Jakarta and Rotterdam. *Environmental Politics*, 1-19.
- WEBER, R. 2002. Extracting value from the city: neoliberalism and urban redevelopment. *Spaces of neoliberalism: urban restructuring in North America and Western Europe*, 172-193.
- WELLER, S. & O’NEILL, P. 2014. An argument with neoliberalism: Australia’s place in a global imaginary. *Dialogues in Human Geography*, 4, 105-130.
- WHATMORE, S. J. & LANDSTROM, C. 2011. Flood apprentices: an exercise in making things public. *Economy and Society*, 40, 582-610.
- WHEATER, H. & EVANS, E. 2009. Land use, water management and future flood risk. *Land Use Policy*, 26, Supplement 1, S251-S264.
- WHILE, A., JONAS, A. E. G. & GIBBS, D. 2004. The environment and the entrepreneurial city: searching for the urban 'sustainability' fix in Manchester and Leeds. *International Journal of Urban and Regional Research*, 28, 549-569.
- WOLSINK, M. 2006. River basin approach and integrated water management: Governance pitfalls for the Dutch Space-Water-Adjustment Management Principle. *Geoforum*, 37, 473-487.
- WOLTJER, J. & AL, N. 2007. Integrating water management and spatial planning - Strategies based on the dutch experience. *Journal of the American Planning Association*, 73, 211-222.
- WOOD, R. & HANDLEY, J. 1999. Urban Waterfront Regeneration in the Mersey Basin, North West England. *Journal of Environmental Planning and Management*, 42, 565-580.
- YEO, S.-J. & HENG, C. K. 2014. An (Extra)ordinary Night Out: Urban Informality, Social Sustainability and the Night-time Economy. *Urban Studies*, 51, 712-726.